



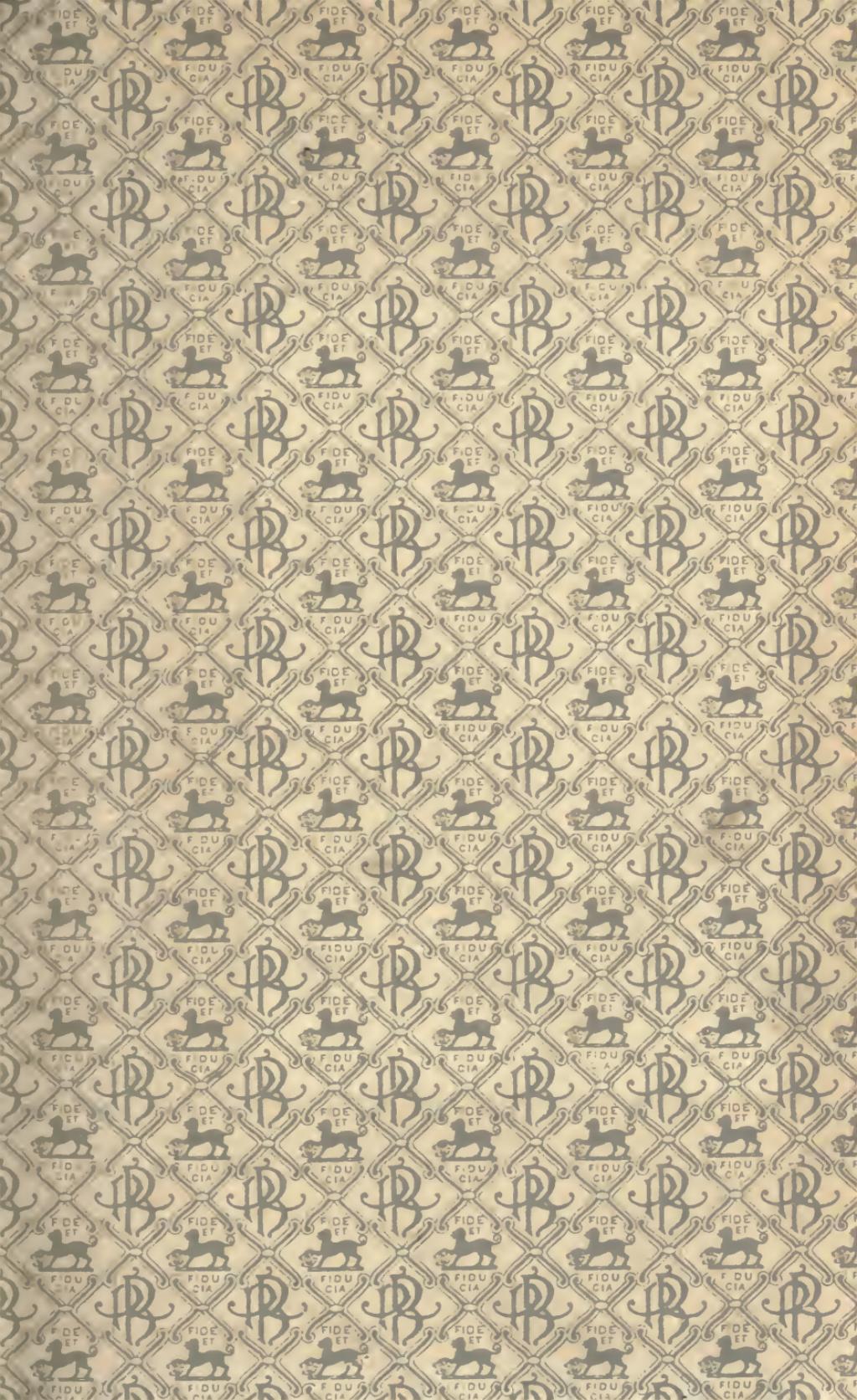
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THE DOMINION OF MAN



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A STRUGGLE FOR LIFE.

THE DOMINION OF MAN.

BY THE

REV. J. G. WOOD, M.A.,

AUTHOR OF

'THE ILLUSTRATED NATURAL HISTORY,' 'BIBLE ANIMALS,' 'HOMES WITHOUT HANDS,'
'COMMON OBJECTS OF THE SEA-SHORE,' ETC.

'Have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.'

GEN. i. 28.

'The fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea; into your hand are they delivered. Every moving thing that liveth shall be meat for you.—GEN. ix. 2.

'Nothing is foreign, parts relate to whole;
One all-extending, all-preserving soul
Connects each being, greatest with the least;
Makes beast in aid of man, and man of beast.'

POPE.



WITH NUMEROUS ILLUSTRATIONS.

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THE DOMINION OF MAN.

CHAPTER I.

INTRODUCTION.

What is signified by Dominion?—Its various manifestations—The power to kill and the power to tame—Primitive man and the contemporary animals—The mastodon—Mammoth and elephant—The primitive horse—Ancient artists—Modern horses—Traction and burden—The horse a beast of chase—The Stone Age of the present day—Ethnology and Zoology—The Australian compared with the Indian and negro.

As far as we know, there has never existed any race of mankind which has not in some way exercised that dominion over the lower animals to which man is entitled by virtue of his birth.

Even among the earliest pre-historic races there is sufficient evidence to show that, although the wild animals which existed in those remote ages were larger, more powerful, more numerous, and, in all probability, more formidable antagonists than any which are found at the present day, man could not only cope with them but overcome them.

Yet he possessed none of the advantages which accompany the civilized life of the present epoch. The club, the spear, and the bow were his only weapons, and even these were of the very rudest and most simple character. He did not even know the use of metals, and could only arm the points of his spears and arrows with flint, stone, or scraped bone. Yet, under these disadvantages, the mammoth, bear, lion, tiger, boar, and other fierce and dangerous animals fell before his primitive weapons.

There is no form of dominion which is more palpable than the power of inflicting death at will on all other creatures, and this power belongs to man alone. But there are higher modes by which man's dominion is exercised, slaughter being its lowest manifestation.

So the pickaxe and spade, which are the enchanter's wand of the present day, and which, instead of foretelling the future, lay bare the records of a long forgotten past, have shown that ages upon ages before man conceived the idea of taming wild animals, and subjecting them to his service, he was able to destroy any creature that was contemporary with himself.

Indeed, there were but few of which man, as he then existed, could make any use.

The horse, for example, was so small and feeble that, even if it had been tamed and trained, it could have done very slight service, and would not have been worth the trouble of training by a race of men

whose whole powers of mind and body were devoted to the single task of obtaining food.

There were, indeed, the elephant and the mastodon, which were possessed of gigantic strength, and might, perhaps, have been taught to use their strength in the service of man. But in those days man had no task for them to perform. Living entirely by the chase, he did not need any assistance in breaking up the ground for the purpose of sowing seed and producing crops. Not for many ages afterwards was agriculture even indicated, and even then the ground was merely scratched with a sharpened stick, the seed dropped carelessly into the slight furrows, and left to grow as it best could, without the aid of any care on the part of the primitive sower.

The very idea of tearing up the earth so deeply that the power of the human muscles would be unequal to the task had at that period never entered the mind of man. The strength of these animals, therefore, would have been useless to man, and all that he could do with them was to kill them, eat their flesh, and make their bones and tusks into weapons, which would enable him to kill more elephants or mastodons.

Similarly, man had no need of the horse, either as a beast of burden or traction.

There was nothing for him to carry or draw, even if he had been strong enough to do either. But he was not able. He was scarcely as large as a New-

foundland dog, as is shown by the bones which have been revealed by the pickaxe and spade. He was a swift-footed, heavy-headed animal, as is shown by the wonderful drawings which the men of ancient times were in the constant habit of executing with the rudest of gravers upon the roughest and most uneven pieces of bone and ivory.

The power of destroying at will an animal so infinitely superior to man in bodily development as a mammoth, to eat its flesh, and to draw its portrait upon its own bone or tusk, is as complete a proof of the dominion of man as can be imagined.

Again, one of the most valuable properties of the horse is that it now affords a means by which man can communicate with his fellow man, although they live so far apart that the journey from one to another would occupy so much time and involve so many difficulties that they might almost as well be separated by the ocean.

The horse, then, formed a means of intercommunication, and, indeed, within the memory of living men, no other means could be employed.

If we read the works of authors who wrote in the last century, we shall see that the only means of communication was by the saddle-horse. Even in my own early days, the only mode of reaching Ashbourne in Derbyshire, where I went to school, from Oxford, where my parents lived, was by stage-coach, the journey occupying three days, whereas the same journey can now be accomplished in a few

hours, and without any fatigue or inconvenience to the traveller.

I need not say that the horse is also employed for the waggon and the plough, and that certain breeds of large and heavy horses are preserved for the traction of weighty goods.

But this is almost the only country where the horse is used for such purposes, and even in England the waggon and plough horses, especially the latter, are of very modern invention—I use the word advisedly. In my younger days, the ox was almost universally employed for drawing the plough, while in America at the present day oxen are always used when speed is not required.

On my first visit to the United States, I was rather startled at seeing oxen drawing the plough, the waggon, and the sledge; and a timber-laden sledge drawn by six oxen seemed a very strange sight, recalling the remembrances of childhood. Soon, however, the eye became accustomed to the sight, and before long I should have been rather surprised at seeing a plough drawn by horses.

In scriptural and classical literature, we find that the horse was reserved for war, the ass or the mule being employed for locomotive purposes. But in the ages which preceded history, mankind was divided into little tribes, or even families, which kept aloof from each other and needed no means of communication.

Still less was the horse required for warlike purposes.

War, as we understand the word, is a product of civilization, and the petty skirmishes of savage life, being conducted by means of stealth and surprises, would be hindered by the use of the horse. To these primitive races, therefore, the horse was simply a beast of chase, to be hunted and eaten. Still, although man did not employ the horse as a servant, he did at least assert his dominion by killing and eating it.

Passing from pre-historic times to the present day, we find ourselves confronted with greatly contrasted phases of life.

In the first place, we are mostly accustomed to consider the Stone Age as belonging wholly to the past, whereas, in various parts of the world, there exist many groups of mankind which have never advanced beyond the Stone Age, and are practically in the same stage of development as the Palæolithic men of pre-historic times.

Such, for example, are the natives of Australia, New Caledonia, and, until very recent days, the aborigines of North America, New Zealand, the Eskimos, and many other nations. Then, in various parts of Africa, we find the gradual development of metal-working, and, whether the material be stone, flint, or metal, the tools and weapons manufactured by the long-extinct races of pre-historic ages bear so close a resemblance to those of present times,

that even the best judges find some difficulty in deciding to which race they belong.

Again, we are confronted with the question of difference between contemporary and often neighbouring races.

Some have but little scope for the exercise of human dominion over the lower animals, because the conditions of locality and climate prohibit the existence of the creatures which are most useful to man. For example, in the Pacific Archipelagoes, including New Zealand, there is no native mammal larger than a rat ; and, in consequence, the human inhabitants, intellectual though they may be, have no animals which they can tame and teach to work for them. Some of them have learned to tame one or two birds ; but, as a rule, their only mode of exercising their dominion is by catching, killing, and eating the fishes, turtles, and other inhabitants of the waters.

With many races the capability for taming the lower animals is clearly dependent upon their intellectual powers.

For example, there are the Australians, to whom the kangaroo is what the seals are to the Eskimos. They have to spend much time in hunting these active animals, and, should they be unsuccessful, must endure the pangs of hunger. Yet the idea of domesticating the kangaroo, so as always to have a supply of food in case the hunt should fail, never enters the head of a native 'black-fellow.'

Any white race would have done so ; and had it not been more profitable to import and breed the sheep and horned cattle of the old world, we may be sure that long before this time flocks of kangaroos would have been as common in Australasia as those of sheep. The kangaroo is easily tamed, and had its products been as valuable, would have been added to the list of domesticated animals, just as the ostrich has recently been added to the list of domesticated birds.

This trait of character is the more remarkable, because the native Australian, savage though he may be, is by no means deficient in intellect, and in this respect is much the superior of the negro.

His code of social law, though unwritten, is clearly defined, universally understood, and enforced with rigid impartiality. His marriage system is so constructed that the evils of consanguinity are rendered impossible ; and for breaches of etiquette he has a court of honour as elaborate as those of the Middle Ages, submitting to its decrees without dispute.

Not being a tiller of the soil, and depending almost wholly for his living on the chase, his intellectual powers are incessantly on the strain, so as to enable him to overmatch the innate cunning of the creatures which furnish him with food and clothing.

More than this, he has invented the boomerang, the most wonderful weapon in the world. The most abstruse laws of mechanics are involved in the flight of the boomerang through the air, and that a

savage should have invented a missile which can strike an object when a tree, hill, or other obstacle shuts it out of the sight of the thrower, seems more than marvellous.

He not only invented the weapon, but none but he can wield it. By dint of practice and instruction, a white man can sometimes cause the boomerang to describe a circle in the air and return to his feet when it has completed its flight ; but he cannot strike an object with it, so that as a weapon it is useless to him.

Yet the Australian, who is master of the boomerang, never thinks of taming any of the very tameable beasts and birds of his own country, even though he has before him the example of the white colonists ; and the idea of catching any creature which he does not mean to eat seems to lie out of the range of his comprehension.

Now let us pass to the Old World.

In Africa and Asia are found the elephant, the chetah (or hunting leopard), and various hawks. How is it that in Asia all these creatures are tamed and rendered subservient to man, while no negro tribe even attempted to convert the elephant into a beast of burden or traction, or to train the chetah to capture the swift-footed beasts of the earth, or the falcon to swoop upon the birds of the air ? Simply because the intellect of the negro races is

inferior to that of the Asiatics. No negro ever invented a mathematical proposition, and, probably on account of some deficiency of intellect, no negro in his own country, and untaught by a higher race, ever trained an elephant, a chetah, or a falcon.

A negro makes an admirable manager of animals which have already been trained ; but, if he were left to his own devices, he would never think of catching a wild animal and training it for himself.

Without adducing further instances, which might be multiplied to any extent, I have shown that any investigation of the relationship between man and the lower animals involves the study of ethnology. Ethnology, in its turn, demands some knowledge of physical geography, which, again, cannot be understood without an acquaintance with other branches of science ; so that our topic occupies a much wider field than is shown at the first glance, and becomes more and more interesting in proportion to the range of subjects which it embraces.

CHAPTER II.

MAN'S FIRST SERVANT.—THE CONQUEST OF THE SNOW.

The dog the first friend of man—Value to man of its different qualities—Origin of the dog—The dog of the East—Its value to man—Eastern cities and the dog quarters—Canine organization—Passport and letter of introduction—Conveyance of canine news—Attachment to Europeans—The Eastern dog protected and despised—Man necessary to the dog—The dog of the North—Traction and burden—Sledge-dogs of Labrador—The 'horses of the Arctic regions'—Mode of driving—Quarrelsome nature of the dogs—Dogs killed by cold—Reason and instinct—The Eskimo dog—Cruel masters—A terrible punishment—Its moral effect on other dogs—Dogs used for traction in England—Dogs on the Continent—The Eskimo dog capable of improvement—The story of Barbekark—Siberian sledge-dogs—Their energy—Influence of man on the dog.

WHERE shall we begin?

Which animal can claim the honour of being the primary associate of man?

Certainly not the elephant, for the services which this gigantic beast renders to man belong to a very advanced stage of civilization, and would have been of no value to primitive man, who could no more make use of an elephant than of a locomotive engine.

Was it the ox, or the goat, or the sheep, or the horse, or the ass, or the dog? I have little hesitation in giving the verdict in favour of the last-mentioned animal, for the claims of the dog seem to me to be paramount.

Let us try to imagine ourselves in the position of primal man. What kind of assistance should we need from the animal world? As yet, we have not learned to till the soil, or, indeed, to lay up food for the morrow. We live wholly by the chase, and, therefore, we need the help of some creature which is swifter than ourselves, and which will enable us to capture prey which would otherwise have escaped us, whose limbs are too slow to overtake it, and whose jaws are not furnished with teeth by which it can be retained when caught.

The animal, moreover, must be so docile that it will give up its captive at the command of its trainer, and must be so much attached to its owner that it prefers his society to that of its own kind, and will not attempt to escape, even when it is at perfect liberty to do so.

There is only one animal in which all these qualities are combined, and that is the dog.

Then, supposing that the creature of which he is in chase has concealed itself in some unknown hiding-place, man wants an assistant whose sense of smell is so keen that it is independent of the eye, and can trace the prey as infallibly by scent as if it were in full view. This capability is possessed by the dog.

This invaluable animal has also several other qualifications which make it a fit companion of man.

When he is sufficiently advanced in civilization to accumulate property, his dog will watch over its master's goods, and defend them at the risk of losing its own life. When he learns the value of intercommunication with other tribes, the dog affords him a means of locomotion, as we shall presently see, and will convey him and his property through and over obstacles which none but the dog could overcome.



ROMAN WATCH-DOG.

He can also act as a beast of burden, and there are large tracts of the earth's surface where the dog is the only animal which can carry a load.

Lastly, when the process of civilization has set the dog free from the necessity of acting as the servant of man, it still retains its connection with the superior being, and becomes his faithful companion and loving friend.

In the course of the following pages we will

attempt to show how the dog fulfils its varied obligations to man, and to trace its gradual advance from slavery to friendship.

The origin of the domestic dog is outside the scope of the present work, and we will therefore try to find it in its very lowest phase—*i.e.*, the mere slave of man, too despised and even loathed to be admitted into his society.

Where are we to find so debased a type of dog? Not, as we might naturally imagine, among the savage races, but among the nations which imagine themselves to be the very quintessence of mankind, and look on others as Gentiles on the one hand, or as unbelievers on the other.

In the East, even at the present day, the dog is regarded as a typically unclean and despicable animal, whose very touch would defile the lowest of mankind. Even the swine can scarcely be regarded with more antipathy than the dog, and throughout both the Old and New Testaments we find its name employed as a synonym for everything that is abhorrent to man.

Compared with other animals, it occupies a position almost identical with that of the ‘mehter,’ or scavenger, among the castes of India. It does not even get the proverbial kicks for its portion. Blows it gets in plenty, and many are its bruises and scars from stones; but the contact of a dog with the foot

of a true believer would so contaminate the kicker that he would be rendered unclean, and have to undergo elaborate purifications before he could again be received into the society of his fellow-men.

Like the human scavenger, the dog of the East is considered as only fit to remove loathsome substances which would defile any less degraded being. Its higher qualities are neglected, and it not only assumes



EASTERN DOG.

the outward semblance of the wolf or jackal, but seems to be possessed of no higher nature. Yet the essential qualities of the dog are not absent. They are only in abeyance, and can be evolved as soon as the dog finds a human being who will endeavour to establish the relationship which ought to exist between itself and mankind.

These dogs are wonderful animals in their way.

No matter what city they may inhabit, they divide it into districts, with boundaries none the less rigid because they are invisible, and each district is inhabited by its own set of dogs. For a dog of one district to venture across its own boundary would probably cost the animal its life ; much as in a public school a boy who dared to cross the threshold of a 'house' to which he did not belong would be sorely maltreated before he escaped from the alien territory.



DOGS OF PALESTINE.

But, although they will not associate with each other, they have their own means of communication, so that the dogs of one district can convey their canine news to those of the next quarter.

There is scarcely an observant traveller in Eastern lands who has not experienced this characteristic of the street dog.

For example, if a visitor should be kind to one of

these dogs, the animal will attach itself to him, will follow him in his walks, and will not allow any other dog to annoy his patron. Should the walk be extended beyond the boundary the animal will not dare to cross it. But he will hold a sort of conversation with the leading dog of the strange district, and, so to speak, give his friend a passport, and letters of introduction to the canine officer in command. He, in his turn, acts as an escort, and thus the traveller is enabled to traverse the entire city without suffering annoyance from the dogs.

Now and then a dog of peculiarly enterprising character sees an opportunity of gratifying its curiosity by visiting regions hitherto unknown.

For this purpose the animal selects some European who has been kind to it and who carries a stick, which even an Eastern dog will respect. Attaching himself to this human ally, and never venturing out of range of the stick, he will traverse in safety the strange domain and return to his friends, the Bruce or Livingstone of his district.

It is worthy of notice that the enterprising dog never expects an Oriental to act as a temporary guardian, so that this trait of character has been developed since Europeans have been in the habit of visiting Eastern lands. Here again, even with these semi-wild animals, the dominion of man asserts itself.

Although on religious grounds the Oriental holds the dog in such contempt that to call a man a dog

or the son of a dog is the grossest insult which can be offered, he will neither injure these dogs himself nor permit any stranger to do so. Indeed, on one occasion, when a Christian resident's carriage had accidentally run over a dog and killed it, the driver was dragged off to prison and the carriage confiscated, and if the owner had not been a man of high position and great wealth, the driver would have stood a very poor chance of release.

Half wild, therefore, though these animals be, they are made to serve their human masters, and without man they could not exist. They are never found except in cities, and the larger the city the more perfectly are the dogs organized for doing the work of man.

When there happens to be a sufficient range of country, the horse can withdraw itself entirely from the service of man, and lead a practically wild life. Should an elephant escape from its mahout, it can rejoin its comrades and renew its untamed existence. But the dog requires the society of man, and cannot exist unless it be subject to his dominion.

Let us pass from these warm regions to the lands where ice and snow reign supreme.

Here the Syrian street dog would be useless, inasmuch as not a particle of animal food is ever wasted by man. Unless, therefore, the dog could do something for man except act as a scavenger, it

could find no mode of existence, and must speedily perish.

But in these northern latitudes, man must be incessantly on the move in order to obtain the means of life, and therefore needs the aid of some creature which can transport himself, his family and property from place to place. In these lands the natural voracity of the dog, instead of being useful to man, and therefore encouraged as much as possible, is distinctly adverse to his interests, and must be repressed in every way. Indeed, if a breed of northern dogs could be trained, like the horse of the fable, to live without eating, they would be invaluable to their possessors.

With these dogs, therefore, man has to exercise his dominion in a totally different manner. For the greater part of the year he furnishes them with food, measuring it out with the most rigid economy ; and, indeed, has learned by dint of long experience the minimum of food on which the dog can fulfil its ceaseless tasks.

Man, in the semi-tropical East, never thinks of demanding any defined service from the dog ; but the inhabitant of the North, being urged by necessity, has discovered that the dog possesses the power of traction and burden, and can be trained to draw a sledge or carry goods over vast regions of ice and snow. So he takes advantage of this instinct, and trains the animals to perform this duty of transport. How he thus exercises his dominion is well shown

in an excellent paper, written by Mr. C. H. Farnham, published in *Harper's Magazine* for September, 1885 :

‘ Dogs are a most important and interesting element of Labrador life. A horse would be of little use in this country, made up in summer of unscalable rocks and water, and in the winter of deep, untrodden snow, and he would cost in food more than he was worth. Dogs here live on the products of the sea—*i.e.*, fish—and can travel over snow and ice. A hogshead of herring per dog is either salted down or protected from the flies and air by a layer of “cod-blubber”—*i.e.*, the liver after the oil has been extracted.

‘ In the fall the salted fish are freshened by soaking ten days in the water, and then piled on a scaffold, so as to freeze and keep all winter. Sometimes the flesh of the seal and whale is used for dog-meat. The dogs are fed but once a day, in the evening, when some of the frozen fish is chopped off and thrown to them. In the summer they shift for themselves by hunting along the beach for fish and refuse.

‘ With wolfish heads, bushy tails, and rough, ragged coats, they have a wild and mournful look, hungry and sneaking, and seem to be a cross between the Eskimo and Newfoundland dogs. They generally are treated as beasts of burden, not as domestic pets, and when you are not afraid of them, they appeal

to your sympathies as the dumb class of Labrador victims.

‘ Their ferocity, however, keeps your sympathy within bounds. They cannot be left in freedom, and when a family leave them unwatched at their home, they are hopped by passing one foot through a loose collar. The kennels are log-huts, so low that the dogs cannot stand straight up to fight.

‘ In some places the kennel is under the house. When two or three teams are confined there the floor often shakes, and the night is a season in pandemonium with their fighting and wolf-like howling. Notwithstanding all these measures of safety, they sometimes kill and devour one another. Their jealousy and hatred of rival dogs can never be subdued. I should add that they form very loyal alliances for defence and amusement. When you see the vital need of mastering such animals at once, you almost approve the brutal treatment which they have to endure. All teams, of course, are not blood-thirsty, but some caution is required in handling even the very best.

‘ The usefulness of dogs in Labrador makes it impracticable to do without them. They are the horses of the Arctic regions, and life itself often depends upon their services. A team of from three to six dogs will draw two or three people twenty leagues per diem. In the spring, when the snow is covered with a good crust, they can go from ninety

to a hundred miles a day, and six dogs will haul a cord of green red-spruce.

‘The words of command are, “Ra-ra!” *i.e.*, haw! “Ak!” *i.e.*, gee! “Ha!” *i.e.*, wo! “Puit!” *i.e.*, get up!

‘The harness consists of a collar and a girth connected by horizontal straps, the trace starting from the girth on the dog’s back. Each dog pulls the sled by his own trace; that of the leaders is from forty to fifty feet long, the others are successively a few feet shorter. When the snow is covered with a sharp, granular crust, the dogs wear boots made of seal-skin.

‘The whip is a formidable object. The lash is about fifty feet long, thick as a broomstick at the upper end, and the handle is only a foot long. Some skill is needed to whirl this thong above your head without cutting off your own ears. The mere crack of the whip, which is like the report of a small rifle, makes all the pack tremble.

‘But even this weapon is not always effective in keeping order. As soon as two teams see each other on the road they break into wolfish howls, and fly outward to meet in a fight. The drivers shout, “Ak! Ak!” and crack their whips; but often the brutes rush pell-mell at each other. The sleds run into them; there is a general roar of the canine “mill,” with shouts of men pulling, beating, and swearing; and, probably, someone may be bitten. At last the teams are separated, and anchored at a

safe distance from each other by turning the sled over, and sticking the points of the runners into the snow. Thus every meeting on the road is interesting.

‘The “comstek” of Labrador is a sled about ten feet long, and two and a half wide, with low, broad, pointed runners rising in front, and having “shoes” made of the jaw-bones of a whale. The floor consists of narrow cross-pieces fastened with raw-hide thongs to the tops of the runners. For long journeys a coach-box is lashed to the comstek, and in it two passengers may sit facing each other, and enjoying the protection of the furs, while the driver perches on the front end of the box, and holds his long whip trailing in the snow.

‘A winter journey in this clear, bracing air, and among these picturesque rocks decked with sparkling ice, is an interesting experience, and if a storm comes on the sagacious leader of a team will win your gratitude and admiration by taking you to some house. But the dogs are not always successful. The cold is sometimes so intense that it freezes the stomach of a dog when the hair is short, and so kills him. And if the dogs are not properly fed, they may give out on a hard journey.’

I have given the above passage in the writer’s own words, because it affords many illustrations of the dominion of man.

In the first place, there is forethought, a property

which is possessed by no earthly being except man, and which is his chief agent in establishing his dominion over those creatures which are not gifted with it. It is true that the ant, the bee, the squirrel, the dormouse, and others, exhibit apparent forethought in laying up a store of provisions for their use during the time when climate cuts off the normal supply of food. Similarly, the solitary bees and wasps lay up stores of vegetable and animal food for the use of their yet unhatched young, and seem to possess an amount of forethought scarcely inferior to that of man.

Yet, the power which impels these beings to lay up their treasures of food is not forethought at all, but pure instinct. Neither of them knows the object of the store which it collects and hides. A first year's squirrel, chipmuck, or dormouse can have no recollection of the winter that has passed, neither can it have any knowledge of the winter that is to come, nor, indeed, form any conception of frost and snow.

Similarly, the wasps and bees, which have just been mentioned, can know nothing of the wants of the little grubs which will, after their own death, be hatched from the eggs which they have so assiduously supplied with food. All these creatures are urged by instinct, without any help from reason, and lay up food-stores because they cannot help themselves.

But man acts from reason alone, and, in exercising his dominion, he is guided by forethought. Let us analyse this account of the Labrador dogs as it

stands, and we shall soon see how comprehensive and irresistible is the dominion of man.

The history begins with a calculation of the amount of food which will sustain a dog during the winter months, when it is unable to procure food for itself. Man has ascertained by experience that each dog requires a minimum of a hogshead of herrings to keep it in good working condition through the winter, and regulates the amount given to each dog day by day. It is necessary, therefore, to catch a vast quantity of fish, even for the maintenance of the three or four teams without which a family could not live.

Then comes another demand upon man's fore-thought, while thus establishing his dominion over the dog.

He knows by experience that the fish would not remain sweet for so long a period without some artificial mode of preservation. Man has discovered—again by means of experience—that there are two simple modes of preserving animal food from putrefaction. One is by saturating it with salt, and the other is by excluding the air. So, according to circumstances, he either salts the fish heavily, or excludes the air by covering it with oil.

Now comes yet another difficulty which man has to surmount when dealing with these animals.

This is their fierce, quarrelsome, and combative nature. The street dogs of the East are just as quarrelsome as their brethren of the North ; but this

instinct is not harmful to the human inhabitants of the cities, who therefore allow the dogs to quarrel and fight as much as they like. But, in the North, every dog that is killed or disabled is a separate loss to its owner, and therefore man's reason is called into play for the purpose of neutralising the destructive element in the nature of the dog.

Man has noticed that when dogs fight, they always rear themselves upon their hind legs. Therefore, by keeping them in kennels so low-roofed that the animals cannot raise themselves into a fighting attitude, their owners oblige them to keep the peace in spite of themselves.

Then the invention and construction of the terrible whip with which the dogs are ruled affords another example of the endless devices by which man proves his dominion over the lower animals.

I may here mention that the formidable 'stock-whip' of Australia, wherewith the cattle-drivers coerce the semi-savage herds over which they are set, is identical in structure and mode of handling with that of the dog-drivers of northern regions on the opposite side of the globe.

In many respects the Eskimo dog, to which reference has been made, is very similar to that of Labrador, and leads an almost identical life. It is rather smaller, and has thicker fur and a more bushy tail, so that it is not so liable to perish from cold.

In one sense, however, it is scarcely so fortunate an animal. Judging by our own feelings, we would scarcely think the lot of either animal a particularly happy one. Yet, as we shall see, the dogs of Labrador evidently enjoy their struggles with the obstacles in their way, and are treated with some amount of kindness.

But the Eskimo is a savagely cruel master, having no idea of ruling his dogs except by force.

It must be admitted that the Eskimo has cause for anger when the dogs, urged by hunger, steal his food, or eat the leatheren traces with which they draw the sledges. Also, when they quarrel among themselves, or even turn upon their masters with the ferocity of wolves, it is necessary to reduce them to order. Sometimes even the whip, when used in the ordinary manner, fails to subdue the rage of a dog when it is madly excited by combat, and for the time almost insensible to pain. Under these circumstances, the Eskimo drags the dog to his feet, stamps a hole in the snow, forces the animal's muzzle into it, and then pounds its nose with the heavy ivory handle of his whip until he is tired.

No dog was ever proof against this terrible punishment, which seems to deprive the animal of the power of resistance, or even of escape. The dog, when seized, knows what is coming, and seems to be as paralysed as a hare when it finds that a weasel is on its track, or a frog when pursued by a snake. It trembles from head to foot, but offers no

opposition ; and even when undergoing a torture which none but a dog with its sensitive nostrils can appreciate, utters no shriek of pain, but only whimpers despondently.

When it is at last released, it crawls away, utterly conquered. The furious wild beast of a few minutes ago has acknowledged the dominion of man, and has taken its proper place as the servant of the very man whose life it was menacing. This branch of the subject is not a very pleasant one, and I would not have mentioned it had not it illustrated the fact that man, even in a most undeveloped stage of civilization, can exert his dominion over animals which possess both the power and the will to tear him to pieces.

There is a further excuse for resorting to this mode of torture, which, to do him justice, the Eskimo does not employ except as a last resource. It has a strangely moral effect upon the other dogs, who stand afar off and contemplate the sufferings of their comrade in awed silence. They never attempt to rescue him, as they might easily do, but are as completely cowed as are the subordinates of a school rebellion when the leader is captured, brought to justice, and publicly receives his deserts.

Not that there is any real need for such cruelty. The Eskimo is little more than a savage, and cannot be expected to act as would become a civilized man. As has repeatedly been proved, when the Eskimo dog is treated with kindness, it will respond to the

higher law, and will be amenable to the rule of love, without needing to be coerced through the sense of pain.

I have, however, adduced this cruel treatment of the Eskimo dogs in order to show that, imperfect as may be the nature of the Eskimo, entirely precluding him from realizing the true relationship which ought to exist between himself and the dog, he, in virtue of his manhood, can exercise the dominion to which he was born even over animals which, if they knew their powers as well as he knows the extent of their capabilities, could tear in pieces and devour him without the possibility of resistance.

But this knowledge on the one side and ignorance on the other are a portion of the nature which enables man, however undeveloped, to rule over every animal with which he comes in contact.

To those of my readers whose memories do not extend to more than half a century, the idea of employing the dog as an animal of traction may appear absurd. Yet I can well recollect when all small traffic, such as cat's-meat, fruit, oyster, whelk, and periwinkle stalls, and, indeed, nearly the whole costermongering trade, was carried on by means of dogs. Street grinding-organs were almost invariably drawn by dogs, while legless cripples never thought their stock-in-trade complete unless they possessed a low tray on wheels drawn by a pair of dogs. In

fact, the dog-cart was as necessary to the professional cripple as the baby and three boxes of matches to the professional female beggar of the present day.

In 'Cruikshanks' Almanac' of the date which I have mentioned there is a plate illustrating the month of July, and entitled 'Dog-days.' It is crowded with figures, among which is conspicuous the inevitable cripple seated in a cart drawn by a pair of dogs with faces almost as villainous as that of their master.

Almost immediately after this plate had been published, there occurred one of the periodical 'scares' about hydrophobia, which, for some occult reason, was thought to be largely owing to the sufferings assumed to be undergone by the dogs which were employed in drawing carts. The plea of humanity was thus combined with the natural dread of 'mad dogs,' and the result was that an Act of Parliament was passed prohibiting any use of the dog as a beast of traction.

One rather amusing argument was that the horse, ass, and ox were created for the purpose of drawing heavy loads, while the structure of the dog was such that to harness it to a cart, however light, was an act of cruelty.

In those days geographical knowledge was at such a low ebb that one prominent member of Parliament had no idea that there was any distinction between the East and West Indies, while another spoke of the 'frozen and burning poles;' and another, when

appointed governor of an important dependency, did not know whether it were an island or part of the mainland. It is, therefore, no matter of wonder that no one in Parliament seemed to have recognised the fact that over vast tracts of the earth's surface the dog was the only beast of traction, and that among these dogs the dreaded hydrophobia was unknown.

Moreover, the dog is still employed for the same purposes on the Continent without increasing the rate of hydrophobia.

Invaluable as is the Eskimo dog to its master, it is by no means all that can be desired. It has not the least love for its owner, and only serves him because it has no choice. Under terror of the whip it is forced to draw the sledge, but it performs its task unwillingly, and evades the collar and trace whenever it can do so with safety. Yet, as I have remarked in the introductory chapter, the higher qualities of the animal are only in abeyance, and do not manifest themselves because they have always been ignored and repressed.

See, for example, the singularly interesting case of Barbekark, one of the Eskimo dogs employed by Captain Hall during his long visit to the polar regions. He was certainly an exceptionally clever dog, as was shown by the performance which first brought him under notice. The dogs were fed on dried 'capelins,' a fish nearly as large as an ordinary herring, ten capelins being the daily allowance. The

animals were fed once daily, and the mode adopted by Captain Hall was to make the dogs sit round him in a circle, and then to go round the circle ten times, giving each dog a capelin as he passed it.

Barbekark, however, thought that the allowance was too small, and, as soon as he had received his capelin, backed out of the circle, ran a little way round it, and then forced his way in again, so as to receive an additional fish. Being amused at the transparent fraud, Captain Hall allowed him to have three more fish than his rightful share, and then passed him over three times. As he was preparing to pass him for the fourth time, Barbekark 'caved in,' crawled up to his master, and lay down at his feet. Of course he was forgiven, and afterwards became quite a civilized animal under his kindly owner's care.

How capable these dogs are of improvement when brought in contact with a higher race may be seen by a letter from a Russian traveller in Siberia :

'I quitted Nicolaievsk in a sledge drawn by dogs. These animals, possessed of incredible vigour and speed, rather fly than run through the snow, and accomplish fifteen versts in the hour. Hence a first little start of eleven versts was not much, but as I depended on the same animals to conduct me as far as the Russian station established at the mouth of the Sungari, I judged it prudent to grant them a long night's rest.

‘ Between Kizi and Gyrin, a distance of eight ordinary post-stations, the snow had fallen in such great quantities that we were often buried in it, but my dogs were accustomed to triumph over such obstacles. I sometimes saw the whole team disappear before my eyes, but soon a united effort brought them to the surface again, when they took breath, and then, with a strong pull at the collars, they carried off the sledge.

‘ This skilful manœuvre reminded me of a swimmer cast among the waves of the ocean. It required, indeed, all the intrepidity of these brave animals to prevent my having to make my way back again. Each time that they fought their way so gallantly through the snow, their eyes shone, and their wagging tails seemed at once to testify to their ardour, and to the noble pride which these friends of man take in serving him.’

In another part of the same communication, he states that his ten dogs easily beat the governor’s sledge drawn by horses.

The concluding remarks are peculiarly apposite to the present subject. As already mentioned, the Eskimo dog takes no pride in its task, but only works under compulsion, whereas the dogs which drew the Russian traveller worked not only willingly but joyously, and were worthy of the complimentary epithets which he bestowed on them. The difference, however, did not lie so much in the dogs as in the

masters, and if an Eskimo had been placed in charge of M. Pargachefski's team, the animals would soon have sunk to the level of the ordinary sledge-dog. Neither under an Eskimo master would Barbekark have developed his mental powers.

CHAPTER III.

MAN'S FIRST SERVANT.—BREEDS OF DOGS.

Direct influence of climate—Indirect influence of man—The 'breeds' of dogs—Direct influence of man upon them—Reasons for their formation and continuance—The greyhound—'Crossing' of breeds—The bull-dog; its form and character—The bull-dog and greyhound—Instincts implanted and form eradicated—The bloodhound and its uses—Bloodhounds in history—Stag-hunting by bloodhounds—Wiles of an old stag—The bloodhound as a detective—Slave-dealers and bloodhounds—The Cuban mastiff—The fox-hound and its mixed ancestry—Qualities of the foxhound—The five missing hounds—The fox-terrier and its use—The bull-terrier—A popular hero—Spaniels—Dogs of the ancients—Egyptian dogs—The various hounds—A spirited group—The Assyrian mastiff—Ancient terrier and dachshund—Breeds in abeyance—The dog as an adjunct of war—German outpost dogs—Their duties and training.

THE two varieties of the dog which have been briefly described in the preceding chapter stand alone.

To all external appearance they are so unlike that they might readily be taken for distinct species. The dog of the East is gaunt, lank, short-haired, and more like a wolf than a dog. It recognises no owner, obeys no master, and does no work, but

spends all its time in sleeping or prowling about for any refuse by which it may appease its insatiable hunger, and mostly having to fight for the meal when food is discovered.

The dog of the North is clad with thick fur, and gifted with a huge bushy tail, which can be coiled round its body when it sleeps, and which then acts as a defence against the cold. It cannot forage for itself during the winter, and would die of hunger if not fed by man. It is essentially the servant of man, and works hard for him during the greater part of the year.

Striking, then, as are the distinctions between these animals, they are primarily due to the climate, man having had no direct influence upon them. The dog of the East is what it is because man has persistently neglected it ; the dog of the North is what it is because man has taken it with him into the regions of perpetual ice and snow.

The warm climate of the East has rendered thick fur needless, while the terrible cold of the North has forced the dog to be long-haired or die.

Now, however, we come to a further development of man's dominion over the dog.

He exercises a direct influence upon it, and causes it to be 'differentiated' not only in form but instincts, so as to do the varied work which he requires from it. No one kind of dog can perform all the tasks which are required of it by man in different parts of the world. Suppose, to take an extreme example,

that we were to transpose the Eskimo and Syrian dogs, we should find that both would be unable to fulfil their respective tasks. One dog would be frozen to death in the first winter, while the other would be overpowered by the constant comparative heat, and fall a victim to the first doggish complaint which attacked it.

Even supposing the climate to be equally suitable, no one kind of dog can perform all the tasks which man demands from the animal. Some are wanted on account of their speed, others for their sense of smell, others for their watchfulness, and so forth. What is to be done? Here are the tasks which can only be fulfilled by the dog, and there are no dogs which can fulfil them. What is man to do?

Here man asserts his dominion in a most imperious and startling manner. He, so to speak, *makes* the kind of dog which he needs.

For example, he wants a breed of dog which can overtake the hare, the gazelle, or other swift-limbed animals. So he picks out from among the young puppies those which possess the longest legs, and keeps them carefully apart from their companions. When they, in their turn, produce young, he destroys all the short-legged puppies, retaining only those which exhibit the characteristics which he desires. So, in the course of years, he contrives to modify the dog into the long-limbed, narrow-snouted, and deep-chested greyhound, the last-mentioned quality

being needed in order to enlarge the lungs and supply the animal with the air which enables it to exert its speed to the utmost.

Compare a highly bred greyhound with an equally highly bred bull-dog or dachshund, and see how great is the difference in their appearance. Yet both came from the same original stock, and if it were not for the ceaseless exercise of man's dominion, would revert to their original form.

There is an episode in the history of the greyhound which exemplifies, in a most startling manner, the empire of man over the lower animals.

Looking only to speed, the breeders of sporting dogs had succeeded in developing an animal which was swift beyond compare. The primary object of the breeders was to produce a dog which could catch a hare, and in this they succeeded admirably. But something else was wanted. According to the conventional views of sport the hare ought to have a chance of saving herself in a legitimate manner. But the greyhound was so swift that no hare had a chance of escape when the greyhound was slipped. The cultivation of the brain had been altogether neglected, and the greyhound could not be made to understand that its duty was to follow the hare and not to 'run cunning'—*i.e.*, turn off at an angle and snap up the quarry at a disadvantage.

It had another and equally evil effect. The dog had no perseverance, and when it happened to miss

the hare at the first attempt, gave up the chase in disgust. At last, one dog-fancier hit upon a singularly ingenious device.

Having noticed that the habits of a dog's ancestors often survived, even though the bodily resemblance to the parents could not be traced, he bethought himself of the possibility of introducing a new element into the breed, trusting that the bodily form could be afterwards eradicated, while the imported instincts survived. So he introduced into the breed a thorough-bred bull-dog, which, as everyone knows, is proverbial for tenacity of purpose.

Everyone, however, does not know that the bull-dog is an animal of great intellect, and of singularly placid disposition. Here, then, were to be found the very elements which were missing in the over-bred greyhound, and the result entirely justified the hopes of this daring innovator.

It need hardly be said that the immediate result of the greyhound and the bull-dog was an animal of portentous ugliness. She was appropriately named Half-and-half, possessing the slender limbs of the greyhound with the heavy muzzle, thick neck, and wide jaws of the bull-dog. The deep chest was common to both breeds.

The offspring of this odd animal were doubly utilized. The primary object was to eliminate every trace of the heavy structure of the bull-dog, and this was fully accomplished in the fourth generation. The tenacity and intellect of the bull-dog, however,

survived, and the result was to produce a breed of greyhounds which retained the long-limbed, light, and swift limbs of the original stock, added to the courage and intellect of the bull-dog. Indeed, since that time all our most valuable breeds are strengthened by a 'strain' of the bull-dog.

Then, the bull-dog itself was improved by a mixture of the greyhound, which imported into the breed an activity of limb which had been neglected in the endeavours to ensure courage and strength of jaw. I often thought that my bull-dog Apollo, whose history has already been given to the public, must have been descended from Half-and-half, so lithe and active were his limbs. I wish that I could have obtained his pedigree; but the gentleman who gave him to me was not interested in such matters, and only knew his immediate parents.

Now we come to a dog which is not required to chase its quarry by sight, but patiently to trace it by scent, even in darkness, though a day or more has elapsed since the animal passed by. For this purpose the greyhound would be quite useless, as there is not sufficient space in the narrow muzzle for the required development of the olfactory nerves—*i.e.*, the nerves of scent. So, in this case, man goes on another track. He no longer searches for length of limb, but for width of nose, and by adhering strictly to this plan, he ultimately produces a dog which is as

remarkable for its powers of scent as is the greyhound for swiftness of limb. I need scarcely say that this animal is known by the name of bloodhound, a breed which has become historical.

Which of us has not read 'Tales of a Grandfather' in childhood, and has not followed in imagination the escape of Bruce from the enemies who were pursuing him, guided by the bloodhounds, whose deep bay could be heard in the distance like the tolling of a far-off bell?

The bloodhound is in these days seldom employed except by stag-hunters, who find its aid invaluable, as the animal is so delicate of scent that it can track the particular stag on whose footsteps it was first laid, and never be diverted on the scent of another stag, even though many other animals may have crossed its path.

This faculty is especially desirable, on account of the many wiles of an old and experienced stag, which has repeatedly baffled the hounds, and lived long enough to possess the 'ten tines' on its horns which render its head an enviable trophy.

Stags are accustomed to make their lairs in secluded spots, and one favourite stratagem of an old stag is to lead the hounds towards the place where it knows a younger stag to be lying. It then makes a great bound, jumps into the younger animal's lair, turns him out, and lies down in his place, thus inducing the tired hounds to proceed on the track of a perfectly fresh stag. The ordinary staghounds can

mostly be deluded by this trick, but not so the bloodhound, which cannot be deceived, and in the end is sure to bring his master to the quarry which he desires.

Formerly, when England was comparatively uncultivated, and police had not been invented, the bloodhound was in much request for the discovery of criminals. During the civil wars which once tore the kingdom to pieces, it was employed for a worse purpose, namely, the tracking of fugitives. In quite modern times, when slavery was permitted in certain parts of the United States, professional slave-hunters made their living by tracking runaway slaves, the bloodhound being one of their principal aids in the chase.

A mixed breed of the bloodhound and mastiff was once employed in Cuba for similar purposes, the dogs being said to be able to cope with a lion.

Our familiar foxhound, which is pronounced by a celebrated authority to be 'one of the most wonderful animals in creation,' affords a fine example of the value of mixing the breeds.

A good foxhound must combine in its single person a number of qualities, the slightest shortcoming in any being fatal to its efficiency. It must have great speed, or it could never overtake the swift-footed fox. It must possess almost illimitable endurance. It must be muscularly powerful in order to force

itself through obstacles, and it must have a most keen sense of smell in order to track the fox in spite of the many wiles of the hunted animal.

No single dog, as formed by Nature alone, can be expected to possess all these qualities, and, in consequence, the foxhound is a highly composite animal, the greyhound element giving it speed, the bulldog blood infusing the needful courage and perseverance, and the bloodhound parentage furnishing the requisite keenness of scent. A remarkable example of the perseverance of the foxhound was recently brought to light.

In February, 1887, a fox ran to earth near Taplow, while being chased by the Old Berkeley Foxhounds. Workmen were summoned to dig the animal out, and, as they were doing so, they came on the skeletons of five foxhounds.

On that very day, eighteen years before, five hounds had mysteriously disappeared from the same pack. Their absence was now explained. They had traced the fox to its earth, had forced their way into the burrow after the animal, and had not been able to extricate themselves.

Fox-hunting has not only produced the foxhound, but its complement, the fox-terrier, whose special mission it is to drive the fox out of its earth.

The hound is but a poor digger, and, even if it could dig, it is too large an animal to traverse the burrow and make its way out again. For this pur-

pose the bull-terrier came into use. Both parents were small and short-legged, the terrier giving the power of excavation, while the bulldog blood gave the necessary courage and grip of jaw. At the present time the fox-terrier has become fashionable, but the bull-terrier does its work very effectually.

There is one now living who has attached himself to a pack of hounds in the western counties, and who is as well known as the pack. Being short of leg, he cannot keep pace with the hounds over open country, but is mostly half a mile or so behind them. The farm-labourers know him perfectly well, and when they have seen the hunt pass by, they always wait for the dog and give him a cheer. When the hounds come to a check, he takes the opportunity of joining them, and if the fox has gone to earth, in he goes after it, without even stopping to take breath. And when he has gone in the fox is sure to come out, so that the dog has well earned the fame which he enjoys.

Then there are the many varieties of the spaniel, the two extremes being the Newfoundland and the King Charles. These, however, are chiefly employed as the friends and companions of highly civilized man, and not put to any definite work.

I have already mentioned the two extreme cases, namely, the dog of the East and the dog of the North, where climate appears at first sight to be the

only factor in the change of form and instinct. This, however, is really not the case, as it is nearly certain that the dog of the East is the typical animal of the doggish race.

Man has, by slow degrees of adaptation, penetrated farther and farther northwards, and has been accompanied by the dog, who, like his master, has adapted himself to the climate, so that he can scarcely be considered as owing his peculiar form solely to climatic influences. It is interesting, therefore, to trace as far back as possible the history of man's subjugation of the dog.

In order to do this, we are forced to rely on records which are far anterior to 'letters.' We are accustomed to think of the Siege of Troy as practically mythological, forgetful that at that very time Solomon was in his glory, and practically the head of the civilized world. Yet many centuries before Solomon was born the Egyptians had devised and perpetuated many 'breeds' of dogs quite as distinct as those of the present day, and evidently used for diverse purposes.

Which was the earliest form of dog that could be useful to man? I have little doubt that the greyhound may claim that honour, as affording the swiftness of foot in which man was deficient. Moreover, the Eastern dog, which I consider to be the original type of the canine race, is nearer in form to the greyhound than to any other artificial breed. Accordingly, we often find the dog represented on ancient monu-

ments to be an animal essentially gifted with the powers of running, in which man is comparatively deficient, and remarkable for length of limb and depth of chest. These animals are represented in various attitudes : sometimes they are shown as led in leashes, after the fashion of our own greyhounds ; sometimes they are sitting at their ease in their kennel, and sometimes they are represented as chasing their prey. In the last case both animals are delineated with astonishing fire and spirit, the action of the hound and its prey being as true to nature as if they had been taken by the instantaneous photograph. But there were animals which could not be captured by a sudden rush, and which could only be taken by comparatively slow and patient chase, the nose being as needful as the legs. Such dogs are also represented on the Egyptian monuments, and are evidently analogous to the foxhounds of our own time.

As far as can be made out from the ancient records, the Egyptians did not use dogs in chasing the lion and other dangerous carnivora. But it is evident that the Assyrians did so, and that they kept a special breed of enormously powerful dogs for this particular purpose. Judging by the massive limbs and heavy jowls of these animals, they were evidently analogous to the mastiff or St. Bernard dog of our own day, each seeming to be almost a match for a lion, and demanding the services of a special keeper.

Returning to Egypt, we can recognise on the

ancient monuments the very types with which we are familiar at the present time. I do not say that they are perfect representatives of their progeny after the lapse of some three thousand years, nor that any of them would gain a prize at our modern dog-shows. But it is impossible to mistake the type. The greyhound, which runs by speed alone ; the staghound, which tracks its prey by scent, and patiently runs it down by endurance ; and the huge mastiff, which is not afraid to encounter the lion, have already been mentioned, and we now have to deal with other breeds.

It is really startling, when dealing with the monumental records of thirty centuries ago, to find ourselves confronted with breeds of dogs which we have always thought to be of modern origin. Yet there is the unmistakable terrier, with its curly tail and pert bearing, so like the terrier of our own time, that it looks as if it had stood for its portrait to Landseer or Herring. Most startling of all is a long-bodied, short-legged dog, which might have been drawn from the dachshund of our own times—an animal which is irreverently said to be bred by the yard, and cut off in lengths as wanted.

It is scarcely possible to exaggerate the importance of these delineations. None of these breeds exist at the present day either in Egypt or Assyria. Even if we put aside the greyhound and the mastiff, what has become of those essentially modern dogs, the terrier and the dachshund ? Why have they lain in

abeyance for thirty centuries? How were they revived after so long a lapse of time?

It might naturally be expected that examples of such extremely conspicuous varieties would have been figured, or at least mentioned, during so long an interval. But they are portrayed as contemporaries of Abraham, and must have existed long before their very characteristic forms were depicted. They disappear for three thousand years, and they reappear as fashionable pets in the reign of Victoria. Who knows but that a similar fate may await them, and that they may again disappear for a like period, and reappear in the four thousandth century, bearing the same forms which their ancestors wore nearly seven thousand years before them?

A further development of the dog as an adjunct of war has recently been carried out in Germany, and the example has been followed by other Continental armies.

Many centuries ago the dog was used in war, but simply as a combatant, the largest and fiercest breeds being naturally chosen for the purpose. After the lapse of some two thousand years the dog has been again utilized for military purposes. It is not, however, employed to fight, but to act as a scout and a carrier of despatches. Size and ferocity would therefore be disadvantageous to the animal; intellect, and not brute strength, being the needful characteristic. The breed which is chosen for outpost service is the Pomeranian, as it is highly intelligent, and quite

seems to enjoy its rather elaborate education and to exult in carrying out its orders.

It is remarkable that the Pomeranian (or Spitz dog, as it is sometimes called) resents a chain or even a string, and if once subjected to either indignity, is ever afterwards useless for all practical purposes. The dog is first taught to distinguish the uniform of his own country, and even in the dark to detect by the sense of smell a soldier of any other nationality. He is also taught to range the country, searching every hedge or spot where an enemy might be concealed, taking care to keep himself under cover as much as possible. Gray dogs are preferred to white, as being less conspicuous.

Each dog wears a small pouch attached to his neck by a slight iron collar. Several of these dogs always accompany the outposts, and as soon as the sentinels are placed, the dogs are sent forward for the purpose of ascertaining whether any of the enemy have concealed themselves in the neighbourhood. Should it discover the presence of a foe, it reports the fact in its own fashion ; the sentry writes a despatch to that effect, places it in the pouch, and the dog then goes off at its best speed to the commanding officer. Guarding against a surprise being the very essence of warfare, and the knowledge that they will not be surprised giving confidence to the soldiers, the value of these trained dogs is very great—a fact of which they themselves seem to be perfectly aware.

The system was, I believe, first put into practice in 1887, but it was long ago anticipated by Dr. Bird in his powerful story, 'Nick of the Woods,' the little dog Peter being an exact prototype of these modern outpost dogs.

In the *Boys' Own Paper* of June 25, 1887, there is a good illustration of one of these dogs ready to start, and only waiting for the officer's order to be off. The illustration is taken from an instantaneous photograph, showing a portion of the camp, with soldiers off duty sitting on the bench outside the guard-house, a sentry at his post, and in the distance some soldiers cooking their food in a field oven.

These dogs have another and not less valuable accomplishment. They are taught to hunt out the dead and wounded on the field, and, owing to their delicate powers of scent, can do so by night as well as by day.

CHAPTER IV.

ALLIANCE WITH THE CAT.

Partial conquest of the cat tribe—Our domestic cat—Cats and mice—Obedience—The dog versus the cat—Imperfect service—The cat of ancient Egypt—Bird-catching—Identity of the Egyptian cat—Gestures of the cat—The decoy-bird—Fish-catching cats—Puddles and ‘Robinson Crusoe’—The death of Selima—The chetah—Its locality, appearance and structure—Its services to man—Indians and wild beasts—Swiftness of the chetah—The chetah of Scripture—The chetah in the field—Antelope hunting—Tame leopards—Sai and his story—A nursery leopard—His love of perfume—Sanger’s menagerie—‘Theory’ and ‘guess’—Man and the lynx—Man and the lion—Rameses II.—Theodore of Abyssinia—The lion confederate—Ancient Egyptians as animal trainers—The tame gazelle—A veterinary’s establishment—A recalcitrant goat—‘Drenching’ the oryx—Kids in the vineyard—The goat in agriculture—Sowing beside all waters—Swine in agriculture—The swineherd’s whip—Trained monkeys—The ‘apes’ of Solomon—A tame giraffe—Tame bear and keeper.

THE conquest of the cat tribe is even now lamentably incomplete, or, rather, has retrogressed in its progress towards completion.

It is true that, to a certain extent, we make use of the domestic cat; but I cannot but think that she makes much more use of us. Pussy manages, in her own quiet fashion, to get things very much her own

way. She certainly catches mice and occasionally rats, but she must do so at her own time and in her own fashion, and not in ours.

Her presence does often induce mice to vacate our premises, and in so far we are grateful to her. But none of the cat tribe can even distantly approach the dog as either the servant or companion of man. Obedience is not among the feline virtues.

A dog, no matter what its particular breed may be, can understand an order given to it by man, and takes a delight in obeying it. But the cat—and through no fault of her own—can seldom understand an order, and even when she does so, will only obey it if she chooses. The fault does not lie so much with the cat, as with the inferiority of her brain, for which she is not responsible.

She can be very affectionate, and can attach herself strongly to individuals. She has frequently developed an inexplicable power for finding out the friends from whom she has been separated, even though many miles of distance may intervene. But, from the constitution of her brain, it is impossible that she can equal the dog in usefulness to man, or can be equally subject to his dominion.

For example, she cannot hunt for him, as the dog does, and although a high-bred cat will, if properly reared, present the mice which she catches to her owner, instead of eating them, she cannot be taught to chase the especial prey which he selects, and bring it to him.

On the strength of a painting on the Egyptian monuments, it is surmised that the ancient Egyptians were able to train the cat to assist them in the capture of birds. But it is by no means certain what species of the cat tribe is represented as helping a fowler in his sport. It may have been the domestic cat, or rather that variety which is known as the Egyptian cat; but the figure is not defined with sufficient clearness to determine the species. If it really be the domestic cat, the Egyptians of some three thousand years ago must have possessed an art which we have long lost.

Another painting, however, seems to me to settle the question.

I very much doubt whether there be any true specific distinction between the Egyptian cat and the semi-domesticated animal which is good enough to take up her residence with us in England.

Be this as it may, the cat which is depicted in this second picture is undoubtedly a very tame animal, having no fear of her master, and feeling a perfect confidence in him. Like the other animal, she has been taken out in the papyrus boat (the 'ark' in which the infant Moses was laid), and is rearing herself against her master's knee, evidently asking to be let loose among the birds which throng the papyrus reeds. My own cats have exactly the same mode of appealing to my feelings when they want me to open the window and allow them to ravage the sparrow and redbreast nests which occupy the

ivy which hangs in heavy festoons over the front of the house.

Both pictures contain another remarkable instance of the dominion of man. The boat, which in one case is a very handsome one, as becomes an owner of high rank, has its prow adorned with a figure-head carved into the semblance of the sacred lotus flower. Just behind the lotus is a tame decoy-bird, whose task was to induce its fellows to settle within reach of the throw-stick or the trained cat. In order to induce the decoy, or 'call'-bird, as our fowlers call it, to remain in the boat, her nest, with its eggs, was placed in the bow of the boat. To make this device intelligible an egg is represented just under the breast of the decoy.

Another point now presents itself to us. The decoy-bird is of the same species as the birds which the cat has been trained to capture. Yet the decoy-bird and the cat are fellow-passengers on the same boat, and the cat has evidently been taught to repress her natural instincts by means of her reason, and, in doing so, has acknowledged the dominion of man. The same may be said of the bird, which has no fear of the cat, and evidently lives on as good terms with her natural enemy as do many a cat and canary, or cat and parrot, in this country, when they are favoured with appreciative owners.

One instance, indeed, is recorded by Frank Buckland where a cat was in the habit of catching fish for its master. The animal was a large black tom cat

called Puddles, belonging to an old fisherman of Gosport, who always went by the name of ' Robinson



Crusoe,' his rightful appellation being George Butler. When Puddles was a kitten his master took him to sea,

and he speedily developed a love of the water quite unexpected in a cat—an animal which is proverbial for hating even to wet its feet. Just as ordinary kittens will run after a ball on the floor and play with it, so Puddles would swim after a cork or feather, and at last actually learned to dive.

He would sit in the bow of the boat and look out for fish, and when he saw a fish of fair size, would leap into the water, seize his prey with claws and teeth, and hold it until cat and fish were lifted out into the boat. His master said that he 'looked terrible fierce about the head' when he rose to the surface with the fish in his mouth.

In 1855 there was a cat living at Oxford which had very much the same habits as Puddles. She used to sit on a wooden wharf just above the surface of the water, and there watched the fish as they swam beneath. Of the smaller fish she condescended to take no notice. But when a fish of half a pound weight or so passed beneath her, in she jumped, and presently scrambled back upon the wharf with the fish in her mouth.

Several of the cat tribe are in the habit of watching for fish at the water's edge by some shallow, and scooping out the fish. The jaguar is celebrated for its skill in fish-catching, and even our own pussy will occasionally act in the same manner, as is too well known to keepers of gold-fish, who have to guard their pets as carefully as if they were canaries. Most of my readers must have read Gray's ode on

the death of Selima, a favourite cat, who met her death by falling into a large china vase in which gold-fish were kept. I may mention that at the time of that tragical event the vase was at Strawberry Hill, and is now in the possession of Lord Derby.

I have not, however, heard of any examples except the two which I have narrated of the cat plunging



into the water to catch fish, and even the Egyptians do not seem to have utilized the cat for such a purpose.

At present, I believe that only one member of the cat tribe is employed by man as an assistant in taking game. This is the chetah (*Felis jubata*),

a very peculiar species of leopard which inhabits northern Africa and India. Its specific name of *jubata*—i.e., maned—is given to it on account of a short but rather thick mane which runs over the neck and shoulders.

It has rather a long neck, a very small head in proportion to its size, and legs much longer and more dog-like than those of the ordinary leopard. Indeed, it is in many respects so unlike the leopards, especially in its mode of taking its prey, that many systematic zoologists have doubted whether it ought to be classed with those animals.

The leopard of the Old World and the jaguar and puma of the New World are essentially tree-climbers, while the chetah mostly keeps to the ground, and, as far as is known, never chases its prey in trees, nor leaps upon it from the branches. Some naturalists even said that its claws were not retractile; but in a series of experiments by the late Charles Waterton on the living animals (afterwards repeated and verified by myself), the claws were conclusively proved to be fully retractile.

The animal is peculiarly susceptible to the dominion of man, and is a valued assistant in the chase, for which purpose it is as carefully trained as the falcon. The Indian nobles are very fond of chasing the deer or antelope by means of the chetah. Indian 'shekarries,' or hunters, are singularly clever in training the chetah; and, indeed, the whole race seems to possess a peculiar aptitude for taming the fiercest

animals. The native fakirs will even tame the tiger so effectually that they will lead the animal about the streets and market-places, simply controlling it with a string.

I have already pointed out that the chief object of man's dominion is to discover the peculiar attributes possessed by different animals, and utilize them for his own purposes. The chief attribute of the chetah is swiftness, which, for a short distance, surpasses not only that of man, but of any known animal. In fact, it has been well described as an 'incarnation of swiftness.'

It is worthy of notice that both the leopard and chetah inhabit Palestine, and are mentioned in the Scriptures by the same title, the ancient writers, like the inhabitants of the present day, being unable to discriminate between the two animals. Therefore the distinguishing habits of both animals are found in the Old Testament.

The mode in which the leopard lies in wait on the outskirts of towns and villages, in order to pick up a stray goat, or dog, or perchance a child, is recognised by two of the prophets. Jeremiah, when denouncing the evil-doers of his age, makes use of a singularly forcible metaphor :

'These have altogether broken the yoke, and burst the bonds. Wherefore a lion out of the forest shall slay them, and a wolf of the desert shall spoil them ; a leopard shall watch over their cities ; *everyone that goeth out thence shall be torn in pieces*'

(v. 5, 6). The reader will notice here the exact knowledge of the three rapacious animals.

The prophet Hosea, who takes nearly all his metaphors from the events of daily life, and from rural pursuits, speaks in equally forcible language : ' Their heart was exalted, therefore have they forgotten Me. Therefore I will be unto them as a lion, as a leopard by the way will I observe them ' (xiii. 6, 7). But when Habakkuk prophesies of the swift inroads of the Chaldeans, he evidently refers to the swift rush of the chetah : ' Their horses are swifter than the leopards, and are more fierce than the evening wolves ' (i. 8).

This swiftness is needed by man, in order to enable him to capture animals which, as we have already seen, are too fleet of limb to be overtaken even by the greyhound itself. The chetah is therefore tamed and employed in a remarkable manner.

For a hunter to pursue the chase on foot, even if accompanied by a trained chetah, would be useless, the deer and antelopes having a wholesome fear of man. But they are not afraid of agriculturists while engaged in their vocation, and therefore the hunters disguise themselves as field labourers, taking with them one of the ordinary bullock-carts, or ' gharries,' which are used for field work. These carts are very much like the flat donkey-carts of our costermongers, only of very much ruder construction. However simple may be our carts, the wheels are at least round, whereas the solid wooden wheels of the

gharry are little more than sections of a tree-trunk with the bark taken off.

As to the use of grease to the axles, it is wholly unknown, and the consequence is that the ceaseless creaking of the wheels is intolerable to European ears. The antelopes, however, are familiar with the sound, and therefore do not take alarm when a gharry passes near them.

The cart is mostly occupied by two hunters, the keeper and the chetah, whose head is covered with a hood which can be drawn over the eyes or lifted at pleasure. When the hunters start the hood is drawn down, and the blinded chetah lies motionless by its keeper's side.

A herd of antelopes being observed, the cart is driven towards the animals, not in a direct line, but obliquely, so as to approach without alarming them. The driver always manages to keep some sort of cover, if it be but a large stone or shrub, between the antelopes and the cart. When the hunters have approached as near as they can with safety, the keeper raises the hood, and points out to the chetah the prey which it is intended to catch. The animal, as it has been taught to do, slips off the cart on the side opposite the antelopes, and then, passing under the cart, crouches to the ground, like a cat in chase of a mouse, and glides rapidly in the direction of its prey, always availing itself of the slightest cover. When it has approached within striking distance, it disguises its approach no longer; but, springing

with a series of astonishing bounds at its prey, and pouncing on one of the antelopes, it pulls it to the ground.

The keeper, carrying a short iron ladle, and armed with his hunting-knife, runs after the chetah, and cuts the throat of the antelope, at the same time uttering the formula which makes it lawful food. The blood he receives into the ladle, and offers it to the chetah. The animal laps it eagerly, and while it is so employed, the keeper draws down the hood over its eyes. The blinded animal is thus rendered helpless, and allows himself to be led back to the cart, where he is ready to attack another antelope. Sometimes, instead of offering the blood to the chetah, the keeper cuts off one of the shanks and gives it to the animal.

Whether the ordinary leopard could be trained in a similar manner is not known. But that the animal can be subjected to the dominion of man has often been proved, and no better example can be adduced than the late Mrs. Lee's celebrated leopard *Sai*.

He belonged originally to the Governor, and was so tame that he was allowed to roam the house like a cat. The children used to play with him just as if he had been a kitten. Being, like all cats, very inquisitive, he was fond of standing on his hind-paws, putting his fore-paws on the window-sill, and watching the passers-by. But the children also wanted the window, and would fight with him for

the best place. Sometimes, when Sai had taken possession of a window, the children, who wanted the place for themselves, would combine together and haul him down by his tail.

Mrs. Bowdich (afterwards Mrs. Lee) became practically the mistress of Sai, and, by taking advantage of his inordinate love of perfumes, succeeded in training him to be a harmless as well as an amusing pet. Not that Sai would have hurt anyone intentionally, though he had a keen sense of humour, and dearly loved to frighten a stranger. But, being a leopard, he must be a cat, and, as all people know, cats have claws.

The forbearance of a nursery cat is proverbial, and, as we have seen, Sai was a nursery cat on a large scale. But without in the least intending to hurt the children, pussy leaves the traces of her claws on sundry little arms and legs, and Mrs. Bowdich was afraid that Sai might inadvertently use his claws and cause serious injury. Now it happened that one day the Governor had poured some lavender-water on his handkerchief. Sai, who as usual was sitting by his master, snatched the handkerchief from his master's hands, tore it into ribbons, and rolled over the fragments until the whole of the perfume had been exhaled. Mrs. Bowdich at once saw her opportunity, and used to gratify Sai with shallow paper trays into which a little lavender-water had been dropped, provided that he kept his claws sheathed. He very soon found out that if he pro-

truded his claws he got no perfume, and speedily learned to keep them permanently sheathed.

Following the same plan, I have made great friends with several of the large carnivora in Sanger's menagerie at Margate. There is a fine male leopard, who, on seeing me enter the house, always expects his allowance of lavender-water. Indeed, long before I can get at the little bottle which I always take with me into the menagerie, his mouth begins to water, and the floor of his cage is quite wet. A tigress and lioness are equally fond of lavender-water, and all these three animals are on wonderfully friendly terms, and will allow me to take almost any liberties with them.

By slow degrees I am trying to induce several other lions and tigers to consider me as their friend, but at present I should not like to put my hand through the bars of their cages. Even the head-keeper, Walter Stratford, who possesses in a marked degree the ascendancy over animals which is a natural gift and can never be learned, is obliged to be on his guard while dealing with these cross-grained animals. Still, the very fact that they are imprisoned without a chance of escape, and that they are wholly dependent on the keeper for their food, is a striking example of the dominion of man.

A scientific writer of the present day utterly repudiates the use of the word 'theory,' and suggests

the substitution of the simpler term 'guess.' Let us then accept the 'guess' that the ancient Egyptians were better trainers of animals than the moderns—in other words, that they asserted the dominion of man some three thousand years ago more forcibly than any modern can do.

There is no doubt that the training of the domestic cat as an assistant in the chase is an art of which we of the present age are absolutely ignorant. Somehow, by whose fault I do not venture to assert, pussy has entirely abandoned her position as a fellow-hunter with man. Yet, as has been shown within historic times, the domestic cat was the acknowledged assistant of man in capturing animals which would have escaped his unaided efforts. Man needed the cat, and although between our domestic pussy and the chetah there is a vast gap, the last-mentioned animal is sufficient to show that even the very independent cat tribe may be pressed into the service of man.

The lynx is said at one time to have acted the same part which is now taken by the chetah; but I am inclined to think that the statement is due to mistaken identity, the lynxes being peculiarly savage, petulant, and unamenable to discipline.

But that the lion himself should be converted into an assistant in the hunting-field seems almost impossible.

That the Pharaoh of Pharaohs, Rameses II., should choose to be accompanied by tame lions, is

exactly what might have been expected from such a man. The late King Theodore of Abyssinia was possessed with the same idea, and in his palmy days was always attended by four tame lions when he ascended the throne on occasions of ceremony. Yet Theodore never attempted to utilize his lions in the hunting-field, though it is almost certain that so essentially practical a man as Rameses II. would not have kept tame lions without making use of them.

Certain it is that Egyptian hunters did some three thousand years ago use the lion exactly as the chetah is employed at the present day. There is a painting among the Egyptian monuments which vividly depicts the chase as conducted by the owner of a trained lion. The hunter, armed with bow and arrows, and accompanied by a trained lion, has gone out in search of game. The wild character of the country is shown by the thorn bushes, which are few and far between, as is depicted in their very conventional representations. An antelope is within easy reach of the hunter.

But antelopes are common enough, and unworthy to be attacked by so noble a foe as the lion. Accordingly the antelope is left untouched, while the lion has pulled down an ibex, is standing with one paw on the neck of the prostrate animal, and is looking round at its master as if asking permission to eat the prey which it has captured. The ibex being beyond the antelope, it is evident that the hunter has pointed

out to the lion the animal which he wishes it to secure.

Those wonderful people, the ancient Egyptians, possessed more than one art the secret of which has long been lost. Eminent as we are in the manufacture of steel tools, we cannot carve granite as they did, sculpturing it as easily as if it were clay, and giving to its surface a soft gloss as smooth and pulpy as if the adamantine granite, which blunts or breaks our best tools, were nothing more than tender marble. Their glass work is still a wonder of execution, and, as we have seen, they could train the cat and the lion in a manner which has not been practised for tens of centuries.

The decoy-bird, which is used just as we employ decoy-ducks at the present day, has already been mentioned, and some Egyptologists have thought that the antelope, which is shown as standing in front of the hunter, was also a trained animal, used as a decoy, and on friendly terms with its confederate the lion, just as the decoy-birds were friendly with the cats with which they worked.

Indeed, the Egyptians seem to have possessed quite a genius for taming animals, as is seen by numerous monumental paintings.

For example, the gazelle seems to have been a great favourite, and is drawn with a knowledge of attitude which shows that the animal must have been constantly under the eye of the artist. There is one really charming picture of a tame gazelle and her

young one, which is drawn with a force and freedom which could not be surpassed by Landseer or Rosa Bonheur. The young one is taking nourishment, while the mother is stretching her graceful head forwards, and is scratching her neck with her hind-foot. The peculiar springy action of the gazelle when bounding away from an enemy is most admirably hit off in the illustration of the greyhound, to which reference has already been made.

The tender care bestowed upon their tame animals by the Egyptians is indicated in many paintings.

Young gazelles, for example, are conveyed in baskets slung on yokes borne by men, just as milk-pails are carried in this country. A similar mode of conveyance is also used by them for a variety of smaller animals, such as the hare, porcupine, etc. It is remarkable, by the way, that while most of the animals are depicted with astonishing fidelity, the porcupine is invariably drawn conventionally, so that it looks much more like a hedgehog than a porcupine.

One very remarkable painting depicts the interior of a veterinary surgeon's establishment, where quite a number of creatures are undergoing treatment. For example, an assistant is holding a pair of oryx by the horns, while the surgeon himself is administering the medicine to them. Another surgeon is giving a 'drench' to a goat which strongly disapproves of the flavour of the draught, and is wrestling on its hind-legs with its physician. Oxen are also

undergoing treatment, and so are some geese. I shall again refer to the ox in a future page. Another drawing shows how, after the vine crop was plucked, the young kids were admitted to the vineyard, and allowed to browse upon the leaves of the vines.

The Egyptians employed animals to perform certain agricultural tasks which would be almost impossible in this country, and for which we are forced to use machinery. For example, the right time for sowing certain kinds of grain is in the first few days after the annual floodings of the Nile have subsided. The seed was thrown broadcast upon the soft, muddy surface, and then troops of goats were driven into the ground, and forced to trample it in every direction until they had trodden all the seed into the ground.

This practice, by the way, illustrates the very familiar passages, 'Cast thy bread upon the waters, for thou shalt find it after many days' (Eccles. xi. 1), and 'Blessed are ye that sow by all waters, that send forth thither the feet of the ox and the ass' (Is. xxxii. 20); these animals being, in common with the goat, employed in treading the seed into the wet ground.

Another use was made of swine. Of course, the pigs could not be trusted to traverse the fields after the grain had been sown, as they would root up the grain and devour it. But after the harvest had been gathered, large herds of swine were driven into the fields, and allowed to remain there until they

had rooted the whole ground up in search of food, and at the same time fertilized it for the reception of a fresh crop.

It is worthy of notice that the whip which the swineherd carries is of the most formidable character. It has a short handle, and the heavy thong is armed with large knobs which are evidently made of metal, and are weighty enough to make an impression even upon the dense hide of a pig. In his 'Bubbles from the Brunnen,' Sir F. Head describes a local swineherd who appealed to the feelings of his pigs by means of a whip whose lash was composed of alternate rings of leather and iron—the modern analogue of the weapon wielded by his Egyptian brother who drove his pigs more than three thousand years ago.

These ancient beast-tamers had learned to press into their service animals over which no such control is exercised at the present day. We cannot, for example, make use of the monkey tribe, and convert them into our servants. Advantage has certainly been taken of their instincts, and especially of their curiosity and imitativeness, to capture them; and, as Le Vaillant has told us, the natives of Southern Africa make use of the common baboon when the supply of water is exhausted. They keep him without water for several days until he is nearly mad with thirst, and then lead him out attached to a long rope, knowing that if water is in the neighbourhood, the baboon is sure to find it.

But the Egyptians, as is seen from more than one painting, succeeded in training the monkey to pluck the fruit from trees, and deliver it to the owner. They did not muzzle the monkeys, but allowed them to eat as much fruit as they liked, thus anticipating the Mosaic law as regards the oxen which tread out the corn. Perhaps also the employers of monkey labour went on the same principle as that which is adopted by pastrycooks and grocers. They allow their apprentices and assistants to eat as many cakes and sweetmeats as they choose, knowing that in a short time they will be so surfeited with sweets that they will prefer plain bread and butter to all the dainties in the shop.

A keen sense of humour pervades all domestic Egyptian art, and the painters have not failed to show that for one monkey which is delivering the fruit to its master, two are helping themselves. The perfect training of the animals is shown by the fact that the monkeys are not attached to cords or chains, but range the trees at liberty, and could escape if they wished to do so.

Another painting represents a couple of men leading a giraffe by means of a cord attached to each fore-foot. It is evident that the animal is tame, and that the men are taking it about as a show, for they have also with them a tame monkey, which is running up the neck of the giraffe, and is so tame that it is not confined by a cord, but is at liberty to do as it likes. While looking at this delineation, it is im-

possible not to recall the remarkable fact that even in the reign of George III., the great traveller and discoverer Bruce was subjected to almost universal ridicule because he described the giraffe, a creature which, as the critics said, was as completely the offspring of imagination as the sphynx or the unicorn.

To return to the monkey, it is evident that the animal was in those days quite as favourite a pet as it is at the present day. The 'apes' which Solomon received every three years from Tharshish (Southern India), were evidently intended, together with the peacocks, to be inmates of the royal menagerie. The word which is translated as apes does not appear to have been employed in the restricted sense of tail-less monkeys, but is a generic word signifying any member of the monkey tribe.

The Assyrians seem to have valued the monkey quite as much as did the Egyptians, and on one of the sculptures discovered at Nineveh there is represented a man walking in a procession, and accompanied by two tame monkeys, one walking by his side and the other perched on his shoulder, and holding to his head by its hands.

Ivory is also mentioned among the valuable objects brought from Tharshish, and even of this incidental description corroboration is afforded by the Egyptian monuments. There is a figure of a man, not an Egyptian, who is bringing as tribute a pair of elephant's tusks carried on his shoulders. He also

leads by his side a bear which is sufficiently tame not to require a muzzle, although a sort of hood, like that of the falcon, is attached to the animal's collar, so that the bear could be blinded if it should prove unruly.

CHAPTER V.

THE CONQUEST OF THE AIR. (PART I.—THE
HUNTER.)

Man and wings—Though wingless, man presses wings into his service—Falconry—Its origin and development—Falcons as insignia of rank—Modern falconry—Falcons as food-procurers—Falconry in the Amoor—The ‘bearcoot’ and its prowess—Bearcoots and wolves—Bearcoots and deer—Mode of seizing prey—Bearcoots and antelopes—Falcons and dogs—The falcon and the antelope—Scientific name of the bearcoot—Falconry of the Tudor times—Falcons apportioned to rank—The jerfalcon and the peregrine—Technical nomenclature—Shakespeare and falconry—The tiercel—Jesses—The haggard—Training the falcon—The lure and its use—Chase of the heron and its dangers—Henry VIII. in peril—Spenser’s description—‘Imping.’

A STILL more striking development of the dominion of man now comes before us.

Hitherto, man has confined his empire to earth. Wingless himself, he cannot but feel a physical inferiority to the many winged creatures which cleave the air, while he cannot raise himself one foot from the ground. The ancient legend of Icarus is but a mythical interpretation of man’s longing to soar above earth and assume the empire of the air. He can penetrate the ground and force it to give up its

treasures ; he can cross the ocean and annihilate the once impassable boundaries between distant lands, but as yet the air is beyond his powers.

Still, although his body is too heavy and his limbs too weak to soar into the air, he can exercise his dominion upon the 'fowls of the air,' and press their wings into his service. He has seen the falcon swoop upon its prey, and, from time immemorial, has made the bird his servant.

Of later days falconry has become practically extinct in this country ; but a few centuries ago it was the chief sport of the nobility, none being allowed to fly a falcon except those of noble birth. To carry a hawk on the wrist was the outward mark of a noble, and the still existing office of Hereditary Grand Falconer bears witness to the former importance of the bird, though the office, like that of Hereditary Champion, has long been a sinecure, and the Grand Falconer knows no more how to fly a falcon than the Champion to couch a lance.

Such is the case with the Arabs of the present day. It is the mark of a noble to travel with a hawk on his wrist. Lady Anne Blunt, in her 'Pilgrimage to Nejd,' mentions that on one occasion, when they were visiting a man of rank, their guide was quite scandalized at finding that they were travelling without a hawk. It was afterwards discovered that the man, being jealous for the dignity of his employers, gave out that they had a falcon with them when

they started, but that they had lost the bird on the journey!

Falconry was a 'gentle science,' like heraldry, and as full of technical nomenclature, as we shall see on a future page.

As, however, is the case with all sports, falconry, as an amusement, was but a survival of falconry as a needful mode of sustaining life. As was well said by Major C. Hawkins Fisher, one of the very few practical falconers of the present day, 'Falconry is one of the very oldest of field sports.'

In the period before firearms and small shot were invented, bows and arrows, nets, cross-bows and snares, lime-twigs and other engines were used for killing birds and winged game, and that in very small numbers. But the killing of game with falcons was in those days a much more effective means of filling the larder with valuable winged food supplies, as nobody would ever think of essaying to take a brace of pheasants or partridges or a couple of ducks for a dinner with bow and arrow. So, having noticed the hawk-tribe swoop on their prey, man conceived the idea of catching and training the birds to continue their habits of pouncing on winged prey, and to give it up to him when caught.

Here, for example, is an instance where the predacious birds are still employed for the purpose of procuring food for their owners. In the regions of the Amoor there is a large black eagle called the bearcoot, of which an admirable description is given

by Mr. T. W. Atkinson in his 'Travels and Adventures among the Mountain Kirghis.'

'Three of these dark monarchs of the sky were seen soaring high above the crags to the south, which were too abrupt to ride over. We therefore picketed our horses to feed, and began to ascend the mountain slope. In about an hour and a half we reached the summit, and descended into a small wooded valley, when we observed the bearcoots wheeling around the upper end. Having gone a quick pace for about three miles, we reached a rocky glen that led us into a valley of the Bean, known as a favourite resort of "maral" (a kind of deer).

'We had hardly entered this spot, when a singular spectacle was presented to our view. A large maral had been hunted down by three wolves, who had just seized him, and the ravenous brutes were tearing the animal to pieces while yet breathing. We instantly prepared to inflict punishment on two of the beasts, and crept quietly along under cover, to get within range. We succeeded, and were levelling our rifles, when Sergae called my attention to two large bearcoots which were poising aloft, and waiting for a swoop. He whispered, "Don't fire; we shall see some grand sport."

'Presently one of the eagles shot down like an arrow, and was almost instantly followed by the other. When within about forty yards of the group the wolves caught sight of them, and instantly stood

on the defensive, showing their long yellow fangs and uttering a savage howl.

‘In a few seconds the first bearcoot struck his prey. One talon was fixed on his back, the other on the upper part of the neck, completely securing the head, while he tore out the wolf’s liver with his beak. The other bearcoot had seized another wolf, and shortly both were as lifeless as the animal they had hunted.

‘The third brute snarled when his comrades set up their wailing howls, and started for the cover. He was soon within range, when a puff of smoke rose from Sergae’s rifle, and the wolf rolled over dead. The report startled the bearcoots ; but we remained concealed, and they commenced their repast with so much gallantry that neither the old hunter nor myself could raise a rifle against them, or disturb their banquet.

‘When satisfied, they soared up to some lofty crags, and Sergae took off the skins of the poachers, which he intended keeping as trophies bravely won by the eagles.’

The reader may perhaps have noticed that the mode of grasp employed by the bearcoot is exactly the same which is used by the osprey when carrying off a fish, the talons of one foot being driven into its shoulders, while the other foot grasps it just at the junction of the tail with the body. Salmon-fishers are practically aware that when they jump into the water to land a hooked salmon they must hold it exactly as is done by the osprey.

To tame this 'monarch of the sky,' and make its ferocity, courage, strength, and swiftness subservient to man, is no easy task, and yet it is accomplished by the semi-civilized Kirghis.

The same traveller to whom we are indebted for the preceding vivid description of the slaughter of wolves by the bearcoot tells us, in his 'Oriental and Western Siberia,' that the bearcoot is used as a falcon by the very great, and employed in catching deer, the true falcons being also used for taking birds. Here is his account of the chase. I must previously mention that the bearcoot is too heavy to be carried on the wrist in the usual manner of falcons, and is always kept perched on a sort of short crutch. When the bird is not employed in the chase the end of the crutch is stuck into the ground in front of its owner's tent, and when it is taken out hunting, the crutch is fixed into a leathern socket firmly attached to the saddle of its keeper.

'The Sultan and his two sons rode beautiful animals. We had not gone far when several deer rushed past a jutting point of the reeds, and bounded over the plain almost three hundred yards from us. In an instant the bearcoot was unhooded and his shackles removed, when he sprang from his perch, and soared high in the air. I watched him ascend as he wheeled round, and was under the impression that he had not seen the animals; but in this I was mistaken. He had now risen to a considerable height, and seemed to poise himself for about a

minute. After this he gave several flaps with his wings, and swooped off in a straight line towards his prey. I could not perceive that his wings moved, but he went at a fearful speed. There was a shout, and away went his keeper at full gallop, followed by many others. I gave my horse his head and a touch of the whip, and in a few minutes he carried me to the front, and I was riding neck and neck with one of the keepers.

‘When we were about two hundred and fifty yards off the bearcoot struck his prey. The deer gave a bound forwards and fell. The bearcoot had struck one talon into his neck, the other into his back, and with his beak he was tearing out the animal’s liver. The Kirghis sprang from his horse, slipped the hood over the eagle’s head and the shackles upon his legs, and removed him from his prey without difficulty. The keeper mounted his horse, his assistant placed the bearcoot on his perch, and he was ready for another flight.

‘No dogs are taken out when hunting with the eagle, as they would be destroyed to a certainty. Foxes are hunted in this way, and many are killed. The wild goat and lesser kinds of deer are also taken in considerable numbers.

‘We had not gone far when a herd of small antelopes were seen feeding on the plain. Again the bird soared up in circles as before—this time, I thought, at a greater elevation. Again he made the fatal swoop at his intended victim, and the animal



KIRGHIS FALCONER.

was dead before we reached him. The bearcoot is unerring in his flight, and unless the animal can escape into holes in the rocks, as the fox sometimes does, death is his certain doom.'

The allusion to dogs needs a little explanation.

I have already mentioned that among the Kirghis falcons are used for the capture of feathered prey. They are also used for chasing the antelope and deer. But though they can overtake such prey with the greatest ease, they are not strong enough to kill it. Dogs are therefore employed in conjunction with the falcon.

The speed of the deer is such that if it should only have a fair start, the dogs would not be able to overtake it, while the extreme wariness of the animal ensures that it will take alarm long before the dogs are near it. The falconer therefore trains the dogs and birds to act in concert with each other.

As soon as the deer are visible, the falconer approaches cautiously towards them, keeping his falcon hooded, and his dogs held by a leash. When the deer take alarm, the falcon is unhooded and thrown into the air, while the leash which holds the dogs is slipped. The deer bound away, and soon leave the dogs hopelessly behind. But now the falcon comes into play. Swift as are the limbs of the deer, her wings are far swifter, and in a few moments she overtakes the flying animals.

Selecting one of them, she swoops down upon it, fixing her talons into its head, and flapping her wings

in its face so as to partially blind it. The terrified deer stops, and tries to shake off the strange foe, thus giving time for the dogs to come up. They seize it by the throat, and hold it until their master arrives and with his hunting-knife soon puts an end to the animal's struggles. A similar combination of the hawk and the hound is employed in India.



The tarpan, or wild horse of Tartary, is taken in a similar manner.

These animals always live in herds, so that, even putting their wariness and swiftness out of the question, it would be almost impossible for the hunter to select any particular specimen. Yet, as the Tartars always recruit their studs from these herds, it is necessary that they should be able to secure those animals which will best suit their purposes. This is done by

means of the falcon, which flies at the animal which is pointed out by its master, clings to its face, and blinds its eyes by flapping its broad wings, so as to detain the horse until its master can come up and secure the new addition to his stud.

In her 'Pilgrimage to Nejd,' Lady Anne Blunt describes the chase of the hare by means of falcons and greyhounds which were trained to act together :

' We had, however, some sport on our way. First a hare was started, and a falcon flown. The Nefûd is so covered with bushes, that without the assistance of the bird the dogs could have had no chance, for it was only by watching the hawk's flight that they were able to keep on the hare's track. It was a pretty sight, the bird above doubling as the hare doubled, and the three dogs below following with their noses in the air. We made the best of our way after them, but the sand being very deep they were soon out of sight.

' Suddenly we came to the edge of the Nefûd,* and there, a few hundred yards from the foot of the last sand-bank, we saw the falcon and the greyhounds all sitting in a circle on the ground, watching a large hole into which the hare had just bolted. The four pursuers looked so puzzled and foolish that,

* The 'Great Nefûd' is a vast desert of red sand, oval-shaped, nearly four hundred miles long, and a hundred and fifty wide. It is about half way between the northern fork of the Red Sea and the Persian Gulf.

in spite of the annoyance of losing the game, we could not help laughing. I do not think that the hares ever dig holes, but that they make use of any they can find when pressed.'

The accuracy of this surmise was soon proved. The hole into which that hare had gone was large enough for a hyæna, and, as it communicated with the rocks, the animal could not be dug out. But shortly afterwards another hare was run to earth, and, on being dug out, was found crouching in company with a little silver-gray fox, which, in all probability, was the excavator of the burrow, and its rightful owner.

Not being able to identify the precise species of eagle which is called the bearcoot, I wrote to the courteous secretary of the Zoological Society, Mr. P. Lutley Slater, and received the following answer: 'There has been a good deal of controversy about the scientific name of the bearcoot. The probability, however, is that it is *Aquila clanga*, of Pallas.'

Even the golden eagle of our own country has been successfully trained and taught to catch hares and rabbits, our present state of agriculture prohibiting the chase of larger game.

Now for a few words on falconry in its palmy days—say, during the Tudor dynasty.

The sumptuary laws (which, by the way, were not without their good points) were still partially enforced, and among them was the law respecting falconry. The different kinds of falcons were apportioned among the various ranks of those who were permitted to carry them. The jerfalcon (*Falco islandus*) of Northern Europe was restricted to royalty, while the Franklin, the lowest in rank who was permitted to carry a hawk at all, was restricted to the kestrel, a bird which can only catch field-mice, or perhaps a lark, if carefully trained to such a quarry.

The falcon, however, which was most generally in use was the peregrine falcon (*Falco peregrinus*) ; according to Major Fisher, 'the commonest by far, but also the most docile, of all her noble race, widely distributed, and indifferent to climate, hardy, bold, swift, and gentle.' The reader will observe that Major Fisher employs the feminine appellation. He does so because the female is not only by virtue of her sex fiercer and more persevering than the male, but is considerably the larger and more powerful.

The male, called in the language of falconry the 'tiercel,' was scarcely considered as a true falcon, and so might be carried by people not of the highest rank. Shakespeare makes constant use of the terms of falconry, which, in his day, would be familiar to anyone who could read. For example, in the celebrated 'balcony scene' in 'Romeo and Juliet,'

Romeo is leaving the garden, when Juliet calls him back with the familiar words :

‘Hist, Romeo, hist ! O for a falconer’s voice,
To lure this tassel-gentle back again’ (ii. 1).

When young hawks were taken from the nest, they went by the name of ‘eyas.’ See ‘Hamlet,’ ii. 2 :

‘There is, sir, an aery of children, little eyases.’

The reader will probably call to mind the standing quarrel between Roland Avenel and the falconer respecting the supposed necessity for feeding eyases on washed meat.

Eyases were not so much valued as ‘haggards,’ *i.e.*, young female falcons captured when in full powers of flight. When newly taken the haggard was always very wild, dragging at her ‘jesses,’ *i.e.*, the leather straps which fastened her to the perch, and attacking her trainer whenever he approached. In order, therefore, to reduce her to obedience, she was kept hooded, and furnished with barely sufficient food to keep her alive. She soon found out that her trainer brought her food, and before many days welcomed instead of attacking him.

In the ‘Taming of the Shrew,’ Shakespeare makes use of this mode of bringing a refractory bird under subjection. Petruchio, under pretence of ‘reverend care of her,’ has kept Katherine without food all day

and without sleep all night, and explains himself as follows :

‘ My falcon now is sharp and passing empty,
And till she stoop she must not be full-gorged ;
For then she never looks upon her lure.
Another way I have to man my haggard,
To make her come and know her keeper’s call,
That is, to watch her as we watch these kites,
That bate and beat, and will not be obedient.
She ate no meat to-day, nor none shall eat.
Last night she slept not, nor to night she shall not ’ (iv. 1).

Allusion is made to the restiveness of the haggard in ‘ Twelfth Night ’ (iii. 1) :

‘ And, like the haggard, check at every feather
That comes before his eyes.’

Again in ‘ Othello ’ (iii. 3) :

‘ If I do prove her haggard,
Though that her jesses were my dear heart-strings,
I’d whistle her off, and let her down the wind,
To prey at fortune.’

When the haggard has become obedient, she is taught to come to the ‘ lure.’ This is a piece of soft, brightly coloured leather, adorned with feathers so as to make it as conspicuous as possible, and attached to a long cord. Some food of which the bird is specially fond is placed on the lure, and the bird allowed to eat it, while a peculiar whistle is blown. She soon learns to connect the lure and whistle with food, and flies eagerly to the lure when she hears the whistle.

Then the lure is drawn along the ground while the whistle is sounded, then whirled round the head, and at last the trainer takes the lure with him on horseback, so as to accustom the bird to follow him when mounted. In like manner she is trained to attack only certain kinds of prey, and when she will do this, and always return to the sound of the whistle while the falconer when at full speed whirls the lure round his head, she loses the name of 'haggard,' and is designated as a falcon.

Major Fisher has been wonderfully successful with his falcons, having taught them to capture the raven, crow, grey crow, rook, wild duck, black game, pheasant, grouse, partridge, woodcock, sparrow-hawk, kestrel, wood-pigeon, starling, lark and linnet.

In the palmy days of falconry the heron was the only bird at which the fashionable sportsman condescended to fly his falcons. But, in those days, herons were quite common birds, so that the falconer could make almost sure of finding several in the course of a morning.

The struggle between the two birds was a very exciting one, the falcon trying to soar above the heron, which, in its turn, tried to keep the pursuer below it. When the falcon at last succeeded in its efforts the two birds had towered until they were almost out of sight, and to keep them in view was a task which tested the best horsemen. They had to leap hedges, clear ditches, and overcome all kinds of obstacles, while the eyes were alternately bent upon

the soaring birds which were scarcely discernible in the sky, and upon the various intricacies of the ground.

So difficult, indeed, was the chase on horseback that many sportsmen preferred to follow the birds on foot, leaping the obstacles by means of a pole. The reader may recollect that, in his younger days, Henry VIII. was nearly drowned while following his falcon on foot, his leaping-pole having broken and allowed him to fall into a muddy ditch, from which he was only rescued just in time to save his life. Historians have often speculated upon the results to England which would have occurred if his attendant had only been a few hundred yards behind his master.

When at last the falcon makes her swoop the struggle is by no means ended. Should it be a successful one, both birds fall to the ground, and the falconer has to be on the spot ready to receive them, and to disable the heron by seizing it by the neck and thrusting its sharp beak into the ground. This is a task requiring great skill and quickness, for the stroke of the heron's beak is swift as lightning, and the bird always aims at the eye of its foe.

Even when the falcon has at last outflown its quarry, the latter, if an old and experienced bird, may yet get the better of its adversary. Knowing that it cannot escape, it does not attempt to avoid the falcon, but twists its beak upwards, so as to transfix its foe by the force of its own descent.

Spenser, in the 'Faerie Queen,' alludes to this device :

'As when a cast* of faulcons make their flight
At a herneshawe that lyes aloft on wing,
The whyles they strike at him with needlesse might,
The warie foule his bill doth backward wring,
On which the first, whose force her first doth bring,
Herselfe quite through the bodie doth engore,
And falleth down to ground like senselesse thing.'

These various battles are sure to injure the plumage, so that the falcon would, in the ordinary course of events, be sadly hindered in chasing prey. But here again man asserts his dominion, and can restore the injured feathers by a process technically called 'imping.' See 'Richard II.'—

'If then we shall shake off our slavish yoke,
Imp out our drooping country's broken wing' (ii. 1).

The process is as follows :

Every falconer keeps by him a stock of wings and tails. When a feather is broken, he cuts it off in a sloping direction, and then cuts in like manner a corresponding feather taken from his stock. A fine needle is then introduced into the 'pith' of both feathers, and the junctions wrapped carefully with fine thread. When this operation is skilfully performed, an imped feather is even stronger than one which has not been broken.

In a paper on modern falconry, read in December,

* *i.e.*, a pair.

1878, before the Stroud Natural History Society, Major Fisher related a personal experience which showed the value of imping. He had received from Liverpool a lovely West African falcon which had arrived by steamer, and which had been so much knocked about on the voyage that it had 'only the stumps of wings and tail, and consequently could not fly a single foot from the ground.' So he set to work at repairing the missing feathers by imping, and in a short time supplied the bird with new wings and tail. The operation was so successful that with these artificial wings it killed more rooks in Wiltshire than all the others put together.

If my readers should wish to pursue this subject farther, they cannot do better than consult Salvin and Brodrick's '*Falconry in the British Isles.*'

CHAPTER VI.

THE CONQUEST OF THE AIR. (PART II.—THE MESSENGER.)

A further development of the conquest—Aerial messengers—The pigeon—The origin of the ‘fancy’ breeds—Tendency to revert to ancestral forms and instincts—The ‘blue-rock’—Rock-loving instinct—Merton Tower and a neighbour’s pigeons—Carrier-pigeons—Belgian birds—The ‘Antwerp homer’—Training the birds—The Crystal Palace—‘Throwing off’ the birds—Finding landmarks—‘Double homers’—Affixing the message to the bird—Artists’ errors—Combination of the pigeon, photograph, and microscope—Pigeons on Hammersmith Bridge—The telegraph and the pigeon—‘Tapping’ the wire—Falcon against pigeon—Decoy pigeons—The German system of training pigeons for military purposes—Experiments in speed—The telescopic eye of the pigeon—Major Hime’s report.

YET another bird is required in order to complete the conquest of the air, and to permit man to advance another step in civilization.

Messengers are needed for the transmission of thought from man to man—messengers which are swifter than any horse, which care nothing for roads, rivers, or even seas, and which cannot be pursued or intercepted by any force that can be brought against them. Such messengers are to be found in the

pigeon tribe, birds whose strength and swiftness of wing are proverbial, which are extremely tamable, and which are not only strongly attached to their home, but possess the faculty of returning to it from great distances and after long intervals of time.

Upon these three characteristics the dominion of man is founded, and, by careful attention to the development of these valuable properties, he has been able to evolve a breed of pigeons as wonderful in their way as the racehorse or the foxhound. For it must be remembered that man did not discover an already existing race of carrier pigeons and utilize them. The carrier, or, as it is more appropriately called, the 'homing' pigeon, is quite a modern bird, and its existence is due entirely to the dominion which man exercises over the whole of the animal kingdom.

The original pigeon from which all the celebrated breeds of carriers, pouters, tumblers, fantails, etc., etc., are derived, is the common 'blue-rock,' and their ancestry is shown by the fact that unless the greatest care be taken with fancy pigeons, they will, no matter what the breed may be, invariably return to the blue-rock type. Rabbit fanciers know, to their frequent disappointment, that even when both parents are of the choicest breeds, and can show long pedigrees, some of their offspring are sure to be absolutely worthless from a fancier's point of view, having reverted to the colour and form of their distant ancestors.

Also it must be borne in mind that although man can develop the form and modify the habits of animals, he can no more create an instinct than a structure. His duty is to detect in the animals certain qualities of form and disposition, and to develop them so that they may serve his purposes.

Putting aside the many dissimilar breeds which render no service to man, and are nothing but 'fancy' forms for exhibition, the modern homing pigeon is so dissimilar to the blue-rock that they might well be taken for different species. Even the habits of the bird have been altered, and, instead of making its nest upon the rocks whence it derives its name, it is content to dwell in artificial cotes made by man, and bearing no resemblance to rocks.

Yet the original instinct often asserts itself, and fancy pigeons of various breeds will occasionally revert to the habits of their remote ancestors, and desert the cote for a rock or old building. Ancient church towers have a strong attraction for domestic pigeons, especially if the cote should be in their vicinity. Some years ago the entire population of a pigeon cote just opposite Merton College, Oxford, deserted to the old tower, and the real owner had the mortification of seeing his birds take their daily flights, but always return to the tower instead of the cote in which they and their ancestors for many generations had been born and passed their lives. As my rooms commanded the tower, I had frequent opportunities of seeing these truant birds.

The blue-rock has been said never to perch on trees, but Captain Mayne Reid states that he has seen it do so.

The bird which was formerly used as a messenger was the carrier; but, of recent years, the carrier has only been bred as a fancy bird, chiefly conspicuous for the enormous wattle at the base of the beak and the corresponding growth round the eyes. The Belgian birds have now completely superseded the carriers, the best being those which are known as 'Antwerp homers.'

The training of these birds is a long and troublesome task, involving considerable expense in travel, beside loss of time. The trainer first takes his birds within an easy distance from their home, and then lets them fly. He goes in various directions, increasing the distance daily, but always making sure that the spot where they are flown is within sight of that whence they last started. At last the birds are even taken to sea or across the channel, until they have learned their way home from almost any place to which they are taken.

The Crystal Palace is a very favourite spot for pigeon training, as it is so conspicuous that the most inexperienced of birds can recognise it at a great distance. It is very interesting to see the pigeons flown. This is mostly done in the early morning, the owners often arriving at Norwood from considerable distances overnight, and letting their birds fly next morning before the road is filled with traffic.

The bird is taken out of the box, held in the usual professional manner, and then thrown into the air. The place being always a strange one, the bird has at first no idea of the locality or even of the direction in which its home is to be sought. It therefore rises higher and higher, circling round the spot where it was thrown off, and is evidently looking out for some landmark which it recognises. Having found it, the bird poises itself for a moment, darts forward as straight as an arrow's flight, and is speedily lost to view.

There is no special instinct in finding the way to the cote. The desire to return to its home is pure instinct, but the means by which it accomplishes its journey have nothing in common with the mysterious power which enables a dog or a cat to find its way home from distant places to which the animal has been conveyed by railway, and shut up in a box. Instances are recorded where dogs and cats have actually found their way home even from places across the sea, not even returning by the same vessel in which they made the outward voyage. No pigeon could achieve such a task, and, indeed, I very much doubt whether, if a pigeon were taken a hundred and fifty miles or so on its first journey, it would find its way back at all. The pigeon guides itself wholly by the sense of sight, so that when a fog arises, any pigeons which happen to be on the wing are always delayed, and sometimes lost altogether.

Most homing-pigeons only have one cote as head-

quarters, but a few of the most intelligent birds have two homes at great distances apart, and when they are liberated from one, always start off for the other. Such birds are of very great value, especially when one of their homes is in a beleaguered town, and the other in some place with which the imprisoned inhabitants wish to communicate.

When the bird is thoroughly trained to its work, it is entrusted with a message. Most of us must be familiar with very sentimental woodcut illustrations to verses of a like character, in which a young lady is represented as holding up her arms to welcome a pigeon (which is never by any chance a carrier or a Belgian homer), under whose wing is tied a letter from her lover. Nothing can be more ludicrously wrong than these illustrations. No pigeon could fly a mile with a full-sized letter tied to a string round its body.

The message is written in small characters on a piece of very thin paper, which is secured either to one of the legs or the quill of a tail-feather, the great object being to save the bird from being hampered in its flight.

During the siege of Paris the homing-pigeons were invaluable, and the messages were conveyed as follows: they were written in small but legible characters upon a large sheet of paper. By means of the photograph the paper was reduced to a size so small that not a letter could be read without the use of a microscope. A whole side of the *Times*

could thus be compressed into a space of scarcely an inch square. Sketches, military plans, etc., were treated in the same manner.

These tiny but comprehensive despatches were then affixed to the pigeon, and sent on their journey. When they reached their destination they were thrown on a screen by the oxyhydrogen microscope, so that the contents could be read by many persons at once.

Until comparatively late days the pigeon afforded the only means of conveying information swiftly, and the birds were taken in great numbers to racecourses, polling-booths, and similar places of interest. For some years I followed the Oxford and Cambridge boat-race on the umpire's boat, and always looked for the cloud of pigeons which ascended from the bridge as the boats passed under it.

When the electric telegraph came into general use, it was said that the pigeon was doomed to extinction as a messenger. Similarly, railways were at first opposed because the engine would supersede the horse, and so that noble animal would be only wanted for show, and the breed would degenerate. Now everyone knows that ten times as many horses are in use as there were before the time of railways, each line of railway being obliged to maintain an enormous establishment of horses for its own use, not to mention those which are used in the cabs and other vehicles which convey passengers to the stations, and those which are employed by carriers,

parcel-post officials, and others, whose occupation would be gone without the railways.

So it is with the pigeon, which is now far more employed than used to be the case fifty years ago. Even when the telegraph is used, the pigeon will often beat the wire unless the telegraph-station is within a very short distance of the sender and receiver of the message. A remarkable instance of this apparent anomaly occurs at Penstone colliery, Haddingtonshire, Scotland. The office is at Smeaton Park, a distance of six and a half miles. Messages are continually passing backwards and forwards, and it is found that the pigeon conveys the message in an average of five minutes, whereas the telegraph often occupied an hour, and sometimes more.

As we have already seen, the developments of modern warfare have brought the homing-pigeon into great prominence as a messenger, especially when towns are besieged. Very little dependence can be placed on telegraphs, as an enemy who knows his business will always cut the wire, or, still worse, will 'tap' the wires, thus drawing off the messages into his own instrument, and sending false messages in return.

Various attempts have been made to intercept the pigeon messengers. They fly too high to be reached by shot, and to fire at them with a single bullet would be useless. Falcons have been despatched against them, but in vain, and even decoy-pigeons

which try to lure them into the enemy's camp have failed.

Great numbers of trained pigeons are therefore upon the establishment of every Continental army, and we are now introducing the birds into our own forces. As might be expected, the Germans have carried out the principle in a most thorough manner, the birds being kept in constant practice.

The whole system is as elaborately arranged as the interior of a fire-station in New York. When a pigeon arrives at its destination, it taps with its beak at a trap-door leading into the cote. The tap of the beak sets in motion an ingenious piece of machinery which opens the door, admits the bird, recloses the door, and rings a bell in the office, so as to call attention to the arrival of a messenger. Not only is a high value set upon the birds, but the Minister of War offers annual prizes of gold, bronze, and silver medals to private breeders and trainers so as to encourage their efforts.

A number of most interesting experiments have been made upon the speed of the birds and the distances which they can be trusted to traverse with safety.

For example, pigeons were sent between Berlin and Cologne, the distance in a straight line being all but three hundred miles. The day happened to be unfavourable, a sharp north-east wind blowing, and, of course, materially interfering with the speed. The winning bird arrived eight hours and forty-one

minutes after starting, thus having flown against a head-wind at an average rate of rather more than thirty-three miles an hour for eight hours together. Had the wind been south-west, even this wonderful rate of speed would have been much exceeded.

A much longer flight was from Würzburg to Posen, a distance of three hundred and fifty miles, which was accomplished in six hours and thirteen minutes ; and even this flight was surpassed by a pigeon flying from Cologne to Posen, a distance of four hundred and forty miles, in seven hours and forty-three minutes. The fastest journey over a short course was made by a bird which flew four miles five furlongs and sixty-two yards in four minutes, giving a speed of nearly seventy miles an hour.

A very bold experiment was tried in 1886 by despatching ten Antwerp homers from Stettin to Copenhagen, and letting them fly at six a.m. on July 12. One bird reached Stettin at three minutes past five in the afternoon of the same day. Three others arrived in company at six, and a fifth bird reached its home on the following day. The remainder of the birds were lost. The chief importance of this trial lay in the fact that neither of the birds had ever crossed the sea.

I imagine that those pigeons which succeeded in finding their way must have done so by towering until they could see across the Baltic some object on the Prussian coast with which they must have been

familiar when taking their customary flights at Stettin.

This brings us to another requisite for these homing-pigeons.

In order to be able to see objects at such distances, the bird must possess a telescopic power of vision. This is just what all birds do possess in a greater or lesser degree. The eyes of birds are so constructed that they can be modified at will into telescopes in order to see objects at a distance. Moreover, they can be altered into microscopes when the bird has to pick up its food, the alteration being automatic, as is shown by dissection.

Major Hime, the secretary of the Royal Artillery Institution, has made a report upon the German system of training pigeons for military purposes. He writes in terms of highest praise, and sums up by the startlingly bold statement that a sufficient staff of trained pigeons could be kept up at the cost of one discharge of a big gun annually.

CHAPTER VII.

THE CONQUEST OF THE WATER.

Birds and fishes—Fish-catching mammals—The otter—Its gait on land—Its activity in the water—Mode of propulsion—The sea-otter and its hind feet—Otter epicures—Tame otters and their use—Bishop Heber's journal—How otters are trained—Mr. Campbell's otter among the salmon and codfish—End of its day's work—Beating the banks—Mr. Richardson's otter—Otter-fishing in China—The harvest of the sea—Fish-catching birds—Ospreys and kingfishers—The cormorant—Charles Waterton's description—Cormorants and eels—Trained cormorants—Fishing with cormorants in China—‘Death's living arrow’—An unlucky eel—Mr. Salvin's cormorants—The three poachers—The cormorant and the conger—Ferdinand Columbus—The sucking-fish and its legendary history—Angling for sucking-fish—The Indians of Cuba and the sucking-fish—Reason *versus* instinct.

ANOTHER development of man's dominion.

Just as there are birds of the air which he cannot always take with traps or shoot with arrows, so there are fishes in the sea or river which evade the net or hook, and would escape him did he not make use of certain beings which can chase and catch the fish in their own element as certainly as the falcon can catch the birds in the air. We will take three

representative animals which man has converted into his assistants in the capture of fish.

The typical fish-destroying mammal is the well-known otter (*Lutra*), of which there are several species, mostly haunting the rivers and lakes, but some attaching themselves to the sea.

The swimming and diving powers possessed by the otter are almost incredible, and the only mode of realizing them is by watching the animals as they disport themselves in the water. Nowadays they have become so scarce, and are so wary, that it is scarcely possible to see an otter in a river, the animals having been forced, by dint of incessant persecution, to baffle the curiosity of those who wish to detect them in their ordinary haunts.

The male is, according to our ideas, a very unsatisfactory sort of a husband, never occupying the habitation that shelters his wife and children, and seldom sleeping in the same spot for two successive nights. His knowledge of the country is, like Sam Weller's knowledge of London, 'extensive and peculiar,' and there is not a hole or a drain within miles with which he is not familiar, even the fox scarcely rivalling him in this respect.

His ingenuity in devising unexpected hiding-places is almost incredible. He always, if possible, contrives to have the entrance to his temporary dwelling under water, so as to leave no scent either on entering or leaving it. In his valuable work on the subject the Duke of Beaufort mentions that the wheel of a water-

mill is often chosen by the male otter as a convenient approach to his hiding-place, having the great advantage that it is impassable to hounds.

But though very few observers, however patient and skilful, have been fortunate enough to watch the otter in its native element, otters are always to be seen in any good menagerie, and most interesting animals they are when they are good enough to show themselves. Being, however, nocturnal in their habits, accustomed to sleep all day in the most retired spot that they can find, and to range the country and ransack the rivers by night, they are not always visible. But they must obey the calls of hunger, and therefore are sure to be awake and about some little time before the hour of feeding.

They gallop round and round the banks of their water-pool with a most singular gait, owing to the fact that the legs are very short, and, in consequence of the length of the body, set very far apart. Occasionally they slip into the water as silently as if it were oil, and can be seen below the surface twisting and doubling with as much lithe activity as if they were eels, propelling themselves with astonishing speed. The long and powerful tail aids greatly in propulsion and guidance, as in the fishes, though the webbed hind feet do most of the work. The sea-otter, however, a much larger species, has a very short tail, and propels itself entirely by the hind feet. But these are very widely webbed, and are set so far back that they approach the corresponding members

of the seal. Many specimens prefer to swim almost wholly on their backs, as is often the case with the seals.

Ever and anon they will glide from the water to the bank without appearing to use the slightest exertion, their bodies seeming to be propelled by mere volition. Sometimes several of them become lively while waiting for their food, and beguile the time with a game at play. They are just like kittens for playfulness, but are even more graceful in their movements, while their wonderful powers of swimming give them a vast advantage over even the most graceful of the cat-tribe when at their best.

Their energies, however, are never fully brought out until a living fish is thrown into the water, in which case the spectator sees what the otter can do. The fish has not a moment's chance against the otter. The keeper always throws the fish as far as possible from the otter ; but, in a moment, the otter is on it 'like a flash of greased lightning,' to use a peculiarly appropriate American metaphor, seizes the fish, and glides to shore with one continuous movement, so easily is the capture effected.

In the salmon rivers of the north the otter is apt to become dainty, and, after it has brought a salmon to shore, only eats the choice meat of the shoulder, and leaves the rest of the fish on the bank. When such an otter has established itself, it is quite a fortune to the nearest shepherd. Otters, when undisturbed, always have favourite feeding-places, and

the shepherd, who has taken note of these spots, visits them at daybreak, and is almost certain of finding enough fish to maintain his family, that which is not eaten at once being dried for future consumption.

In many countries the fish-catching powers of the otter are pressed into the service of man, and the animal, which is the falcon of the water, is trained to perform in the sea or river similar tasks to those which the falcon so ably fulfils in the air.

The native Indians, who, as I have already mentioned, have a peculiar gift for training animals, have long employed the otter for this purpose. Bishop Heber, in his well-known journal, mentions that he saw lying on the bank of the river a number of tame otters, tethered by long ropes attached to collars woven out of straw. These were the Asiatic (sometimes called Chinese) otters (*Lutra Sinensis*), a species very similar to our own. They are trained in a way curiously similar to that which is employed in training falcons. For this purpose the animal is taken when very young, and fed entirely on bread and milk, not being allowed to eat a morsel of fish. An artificial fish is then tied to a string, and the otter taught to chase it and bring it to its master, just as a retriever dog will bring a stick. A real fish is then substituted for the imitation, and the animal punished if it mangles the fish, while it is rewarded with some special dainty when it restores it uninjured. Our own otter is equally susceptible

of training, and I cannot but wonder that, instead of trying to exterminate the animal, we do not make use of it, and assert our dominion over it.

One of these animals which had been trained in Scotland used, when fishing in the river, to catch for its master, a Mr. Campbell, from eight to ten salmon daily. It was equally successful in the sea in the chase of the codfish, and, when it captured a large fish, it always bit its prey just above the tail, so as to break the spine and thus deprive the fish of the power of locomotion. When it was quite tired, it declined to enter the water. Mr. Campbell then fed it, when it always composed itself to sleep, and was usually carried home while still sleeping.

Another tame otter was accustomed to fish in a shallow stream where its movements could be easily watched. It always swam up the river, probably because it knew instinctively that fish always keep their heads against the current, and therefore approached them from behind.

This animal had a remarkable mode of hunting, which may possibly be common to all the otters. Anglers are well aware that the largest fish, especially the trout and pike, inhabit certain nooks, technically called 'holes,' in the banks. The otter was accustomed to swim close to the banks, swishing its tail sharply against them, so as to drive out any fish that might be lurking there. Sometimes an old and crafty fish declined to be alarmed, and only clung the tighter to its shelter. With such fish the otter

did not meddle, but if a fish tried to escape, the otter darted at it, caught it, and brought it ashore in a moment.

One of these animals, which belonged to Mr. Richardson, was accustomed to accompany him in his walks by the river-side, and would fish as she went along. She, contrary to the usual custom of tame otters, showed no affection for her master, and never would give up the fish which she caught, carrying them to the opposite side of the river, and eating them at her leisure. Mr. Richardson mentions one or two very remarkable phases of disposition displayed by this animal :

‘ Although this otter failed to exhibit those affectionate traits of character which have displayed themselves in other individuals of her tribe towards the human species, she was by no means of a cold or unsocial disposition towards some of my smaller domestic animals. With an Angora cat she soon formed a very close friendship, and when in the house was unhappy when not in the company of her friend.

‘ I had one day an opportunity of witnessing a singular display of attachment evinced by this otter towards the cat. A little terrier dog attacked the latter as she lay by the fire, and, driving her thence, pursued her under the table, spitting and setting up her back in defiance. At this instant the otter entered the apartment, and no sooner did she perceive what was going on, than she flew with much

fury and bitterness upon the dog, seized him by the face with her teeth, and would doubtless have inflicted a severe chastisement upon him had I not hastened to the rescue, and, separating the combatants, expelled the terrier from the room.

‘When permitted to wander in the garden, this otter would search for grubs, worms, and snails, which she would eat with much apparent relish, detaching the latter from their shells with surprising quickness and dexterity. She would likewise mount upon the chairs at the window, and catch and eat flies, a practice which I have not hitherto seen noticed by any naturalist.’

The Chinese also make use of trained otters, but seem to be rather clumsy in their mode of inducing the animal to give up its prey. They do not trust the otter untethered, but take it out in a boat, to which it is attached by a long cord. As soon as the animal seizes a fish, it is hauled into the boat and forced to relinquish its prey by the simple and rather cruel process of stamping on its tail.

There is a harvest of the sea, and its reapers are many. But the sea needs no tillage, and its harvest is perpetual.

Putting man aside, there is but one terrestrial mammal which can be said to obtain its entire living from the sea, and that is the sea-otter (*Enhydra lubris*), an animal which, as far as I know, has never

yet been pressed into the service of man. Marine birds, however, swarm round the coasts, some, such as the gulls, living mostly on the flotsam and jetsam of the sea, or on the small animals which can be taken on the shore when the tide is out. Some there are, however, which feed on living fish which they capture for themselves in fair chase; such, for example, are the ospreys, which swoop down on fish in the sea just as the kingfisher pounces on its prey in the rivers. Others can, like the otter, dive into the water after the fish and capture it by superior speed and activity. Of such birds, the most common is the cormorant (*Phalacrocorax* or *Graculus*), of which more than one species can be found on our shores.

A near relative of the pelican, it is even more renowned than that bird in the capture of fish. Very few of the pelicans can dive, but all the cormorants are notable divers, pursuing and managing to swallow fish of apparently disproportionate dimensions. Of eels the cormorant is especially fond, and several observers have recorded some rather ludicrous instances of the struggles between cormorants and eels.

The late Charles Waterton, in his essay on this bird, describes one of these contests. Like many other marine birds, cormorants frequently took up their winter quarters in the lake that surrounds Walton Hall. In those palmy days for destitute birds, no gun had been fired within those sacred precincts for many years, nor was any living creature

disturbed there. Taught, I presume, by their bird companions, the cormorants at once became as fearless as the other winged guests of Walton Hall. Here is an extract from Waterton's own account. After mentioning that many which visit the neighbourhood are shot by gamekeepers—a class of men to whom he had the strongest antipathy—he proceeds as follows :

‘ Those which find their way here are so unconscious of danger, that, after they have spent a considerable portion of time in diving for fish, they will come and preen their feathers on the terrace which rises from the water within ten yards of the drawing-room windows.

‘ You may know the cormorant at a distance, among a thousand water-fowl, by his upright neck, his body being apparently half immersed in the water, and by his being perpetually in motion when not on land. While the ducks and the teal and widgeons are stationary on the pool, the cormorant is seen swimming to and fro, as if in quest of something. First raising his body nearly perpendicular, down he plunges into the deep, and, after staying there a considerable time, he is sure to bring up a fish, which he invariably swallows head-foremost.

‘ Sometimes half an hour elapses before he can manage to accommodate a large eel quietly in his stomach. You see him straining violently, with repeated efforts to gulp it ; and, when you fancy

that the slippery mouthful is successfully disposed of, all on a sudden the eel retrogrades upwards from its dismal sepulchre, struggling violently to escape. The cormorant swallows it again, and up again it comes, and shows its tail a foot or more out of its destroyer's mouth. At length, worn out with ineffectual writhings and slidings, the eel is gulped down into the cormorant's stomach for the last time, there to meet its dreaded and inevitable fate.'

The Chinese make great use of the cormorant as a fish-catcher, training it carefully to its task ; and a very interesting account of fishing by means of cormorants has been given by Mr. Fortune in his valuable work on China.

The implements used in cormorant fishing are few, simple, and can easily be made by the fisherman. There is first a small raft made of the ever-useful bamboo, and about twenty feet in length. A paddle wherewith to propel the raft, a long and slender bamboo wherewith to direct the birds, a stout landing-net, and a wide-bodied, narrow-necked basket in which to put the fish, are all that is needed.

Three or four cormorants are employed at the same time, because it sometimes happens that a cormorant seizes a fish too large for it to master, and, in such a case, one of its comrades goes to its assistance. An instance of such aid will be presently given. Just before the fisherman starts on his ex-

pedition, he slips over the neck of each bird a ring which is loose enough to permit the bird to breathe freely, but too tight to prevent it from swallowing anything but a small morsel.

The projecting bamboos of the raft afford excellent resting-places for the cormorants, which, unlike web-footed birds in general, are able to perch on branches. This peculiarity has been noticed by Milton in 'Paradise Lost,' where Satan is represented as entering the garden of Eden, and plotting the fall of man :

‘Thence up he flew, and on the tree of life,
The middle tree and highest there that grew,
Sat like a cormorant.’

From their perches the birds are able to espy the fish that swim below. As soon as a fish of sufficient size is seen the cormorant is sent after it, and in a moment captures it.

‘The cormorant, death’s living arrow, flew,
Nor ever missed a stroke, or dealt a second,
So true the infallible destroyer’s aim.’

JAMES MONTGOMERY : *Pelican Island.*

If the fish be a moderate sized one the cormorant brings it to the raft. A larger fish demands the aid of the bird’s master, who slips the landing-net under it, and lifts it upon the raft together with its prey. When the cormorant has given up its victim, its master raises the ring round its neck, and gives the bird a morsel of fish as a reward. Sometimes a

light-hearted young bird is so elated at catching a fish that it swims about and amuses itself instead of attending to its business, and is then admonished by a blow of the paddle on the water. If this be not sufficient the long bamboo is brought into action, and soon reduces the bird to submission.

When the birds have finished their work, they are well fed with the least valuable of the fish, eels being generally reserved for this purpose. As fish mostly congregate under shelter, this sport is mostly conducted near bridges, which are sure to be crowded with interested spectators.

Mr. Fortune gives, in the course of his narrative, an amusing account of some cormorants at feeding time. They were supplied with eels, which they gobbled as fast as they could, each trying to get more than its fellows. After all the eels had been swallowed, one of them made its escape, exactly as narrated by Waterton, and immediately became the centre of a struggle among all the birds, the rightful owner being in the end deprived of his property.

The cormorant has been successfully trained in England. The late Frank Buckland narrates an amusing anecdote of Mr. Salvin's well-known tame cormorants.

Two of the birds had seized a fish which was too powerful for them, and was on the point of escaping. This was too much for Buckland, who jumped into the water and helped the cormorants by grasping the fish by its tail. One of the spectators was quite

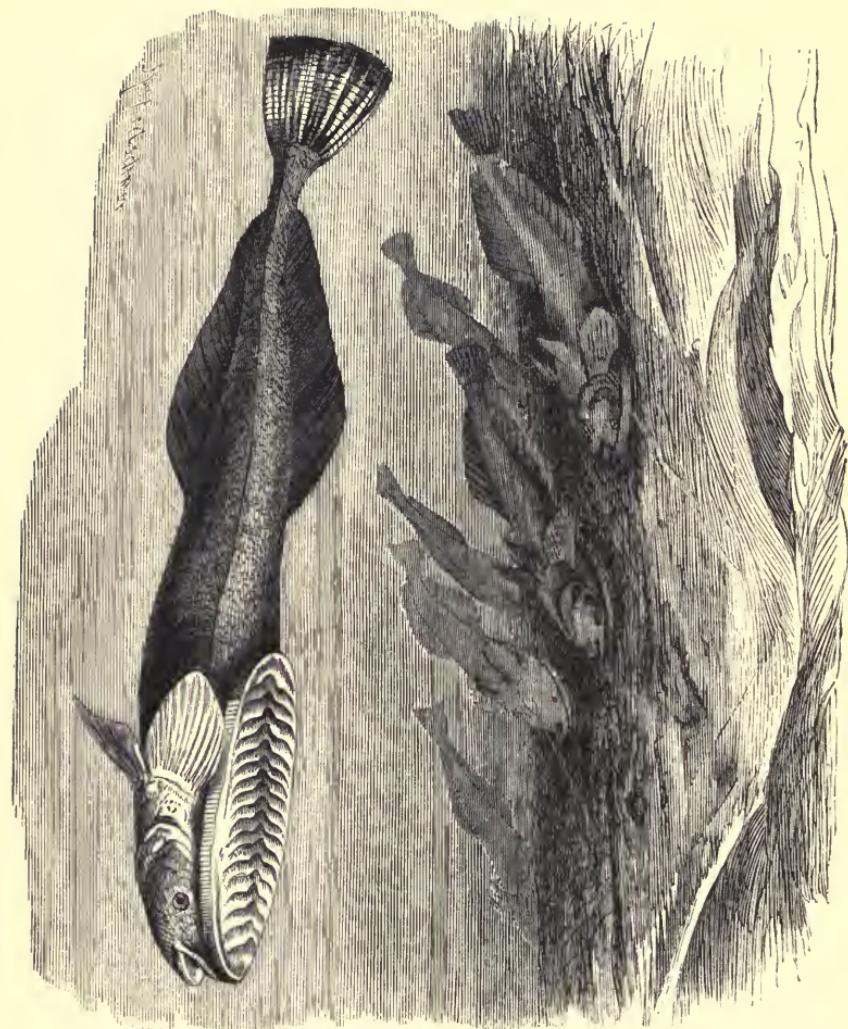
indignant, saying that 'he never see three such poachers in his life—two birds with straps round their necks, and a gent who ought to have a strap round hisn.'

Sometimes the bird gets the worst of the struggle. In the Truro museum there is a most remarkable group of a cormorant and conger eel. The cormorant, in making its stroke, had missed its grasp of the neck, and had driven its upper mandible through the lower jaw of the eel, and was unable to extricate itself. The eel had, in its struggles to escape, twisted itself so tightly round its destroyer's neck that the latter was strangled. The dead bodies of bird and eel were found lying on the shore.

For the first account of a most singular example of the dominion of man we are indebted to D. Ferdinand Columbus, son of Christopher Columbus, and his fellow-voyager.

Everyone has heard of the celebrated sucking-fish (*Echenëis*), and most persons have read the wild legends which prevailed concerning the almost miraculous powers of the fish. It was said to attach itself to the keels of ships, and by its wonderful powers to prevent the ship from moving a yard, even though under full sail.

Poets made great capital of this legend, which was as firmly believed as the sailing powers of the nautilus, the existence of the unicorn, and the develop-



ment of certain geese from barnacles. Indeed, the scientific name of *echenëis*, which signifies a ship-detainer, shows that the legend was believed even by those who knew something about animal life. Yet the fish is really a most wonderful creature, and needs no fables to render it interesting.

There are many species of sucking-fish, most of them being about as large as an ordinary herring, but some of them measuring not far from three feet in length.

All these fishes have on the upper part of the head an oval disc surrounded with a soft and elastic edge, and fitted in the interior with a number of transverse plates, or 'laminæ,' and looking much like the laths of a Venetian blind. 'Their number varies from twenty to twenty-five, and in one species they are so large in proportion to the fish, that the disc occupies nearly half the length of the entire body. The principle on which the disc acts is precisely analogous to that of the suckers of the various cuttles, the edge of the disc being pressed firmly against any smooth surface, and the laminæ being then folded downwards so as to produce a partial vacuum.

These fishes are fond of travelling without taking the trouble of transporting themselves, and consequently attach themselves by means of the suctorial disc to the bodies of other fishes, especially sharks, turtles, and the hulls of ships and boats.

They are frequently taken with the hook, but

some skill is needed for their capture. They take the bait readily enough, but must be whipped out of the water at once, as if they have but a few seconds of time after being hooked, they will attach themselves to the hull of the ship, and cling to its smooth surface with such force that the hook will be torn from their jaws before they will loosen their hold. The idea of utilizing this extraordinary power for the benefit of man is so boldly ingenious that one almost wonders why it should be the invention of a savage race. Here is an extract from Ferdinand Columbus's account of Cuba :

‘ In one of these chanels they spyed a canoo of Indian fishermen, who very quietly, without the least concern, expected the boat which was making towards them, and, being come near, made a sign to them in it, till they had done fishing.

‘ Their manner of fishing was so strange and new to our men that they were willing to comply with them. It was thus :

‘ They had tyed some small fishes they call *reves* by the tail, which run against other fish, and with a certain roughness they have from the head to the middle of the back, they stick so fast to the next fish they meet, that when the Indians perceive it, drawing their line, they draw them both together ; and it was a tortoise our men saw so taken by these fishermen, that fish clinging about the neck of it, where they generally fasten, being by that means safe from the

other fish biting them, and have seen them fasten upon vast sharks.'

The sucking-fishes are themselves very good to eat, so that the ingenious captors must originally have made good use of their intellects at the expense of their instincts, and thus have asserted the dominion of man.

CHAPTER VIII.

MAN AND THE WEASELS.

The ferret—Its supposed origin—How it is used by man—Rabbits and rats—Training the ferret—Specific against biting—How to make a ferret loosen its hold—Muzzling the ferret—Sewing up the mouth—Boring the lips—The leathern muzzle—The string muzzle and mode of applying it—The check-string—A ferret's temptations—Rats and ferrets—Native tacticians—The stoat, or ermine—British ermines—The weasel—Its possible use to man—Odour of the weasel tribe—A tame skunk—The badger—Its character libelled—Mr. Barkley's badger—The offices of the badger—Value of the badger as a pet.

IF we can utilize the fish-catching powers of the otter to aid us in capturing salmon and other fish which are too strong and too wary to be taken by hook or net, why should we allow, with one exception, the whole race of weasels to remain outside the dominion of man?

The sole exception is the ferret (*Mustela furo*), which has long been brought under man's influence, and so completely subjected that I do not know of a single instance of a ferret being found in a wild state unless it has escaped from its owner. Some naturalists account for this fact by saying that the ferret is naturally an inhabitant of Africa, and has simply

been acclimatised in this country, and are strengthened in this opinion by the animal's well-known impatience of cold. Other naturalists have thought that it is not a separate species, but merely a variety of the common polecat. However, it is now pretty clearly ascertained to be a genuine British species.

Whether it be more susceptible to kindness than its relative the polecat is not easy to say ; but, at all events, it is fond of human society, and when well treated never seems so happy as when being fondled by its owner, or lying snug and warm in his pocket. It is therefore a great favourite with boys, who mostly keep it as a graceful pet, and have no opportunity for using it.

I need hardly say that it is employed for two purposes, namely, to attack rabbits and rats in their burrows, and drive them out so that they can be shot or trapped, a task for which it is exactly fitted by reason of its long, slender body, short legs, and essentially predaceous nature. Indeed, were it not for the ferret, the professional rat-catcher and rabbit-killer could not carry on their vocations.

For this purpose the animals are carefully trained from infancy, and accustomed to be handled while still with the mother. At first they are rather disposed to bite, especially if the hand be suddenly withdrawn. But it is a curious fact that although a ferret will bite a finger, it will not bite the closed fist if the knuckles be presented to it. So by touching the young ferrets at first with the fist, they become

accustomed to the feel and smell of the human hand, and will allow themselves to be taken up, caressed, and then replaced with their mother. If by chance one of them should happen to seize the finger, it can be induced to loosen its hold by blowing steadily into its nostrils. It is thus rendered incapable of breathing, and is perforce obliged to open its mouth.

When employed in the rabbit warren it is always muzzled, as even the best-trained ferret cannot always resist the temptation of killing the rabbit, gorging itself with the still warm flesh, and then coiling itself to sleep by the side of its victim. It must therefore be muzzled in some way, and various plans have been adopted. Not many years ago a barbarous practice was prevalent of sewing up the lips of the ferret before placing it in the rabbit burrow, and so strong is custom that gamekeepers and other rabbit-killers could scarcely be made to understand that the pain engendered by the newly made wounds was a hindrance to the animal in doing its work. 'It always had been so,' they argued. 'Ferrets always had their mouths sewn up before going into the burrow, and so it always should be. Besides, sewing the mouth was good enough for their fathers, and it was good enough for them.'

Then another plan was adopted, not so cruel as that which has been mentioned, but still productive of pain once. The head of the animal being held fast, a stout needle heated to whiteness was passed through the upper and under lip at each side. A

permanent hole was thus formed, through which the thread could be passed when the ferret had to be muzzled. The needle being white hot, the nerves were destroyed at once, and I do not think that the animal suffered more pain than is voluntarily endured by a lady when she has her ears bored.

In order to save the creature even the pain of this operation a leather muzzle was invented, which, if it happened to fit, answered every purpose. But scarcely any two ferrets are alike, and, in consequence, the muzzle was sometimes so loose that it slipped off the head and hung round the neck, thus incommoding the ferret in its work, or it was so tight that it caused a painful pressure on the jaws. It was, in fact, almost necessary to have every ferret measured for its own muzzle.

All inventions are improved by simplification, and now, with some eighteen inches of soft twine, a ferret can be muzzled as effectually as if its lips were sewn together, and as rapidly as if the leather muzzle were applied. Nothing can be simpler than this process. Take the string and pass it over the ferret's neck just behind the ears, leaving the ends of equal length. Tie it under the throat in a reef-knot, just tightly enough to keep it from being pulled over the head. Bring the two ends together under the chin, and tie another reef-knot at the spot which comes just under the angle of the jaws. Now pass the ends over the upper jaw, and tie them with another reef-knot. Cut off the superabundant ends, and you have a muzzle

which is absolutely efficacious, which will fit any ferret to which it is applied, which can be affixed in less time than is occupied in fastening the leathern muzzle, and can be cast off in a moment, as can all seamen's knots.

Half an hour's practice on a stuffed ferret, polecat, or even stoat, will enable any ferret owner to be independent of purchased muzzles, and to close the mouths of his pets without giving them the least pain, or causing them more than a temporary inconvenience, which is more than counterbalanced by the delight which the animal experiences in being allowed to follow its natural instincts, and chase the rabbit through the complicated windings of the warren.

I need hardly say that while the ferret is learning its lesson of self-abnegation it is not allowed to go loose into the rabbit's burrow, but is held by a string fastened to its collar. Finding that whenever it tries to indulge in a little laziness, after the manner of young people in general, it is at once hauled ignominiously into the light of day, it comes to believe that as soon as it ceases to work it will be dragged out of the burrow and consigned to imprisonment. How this punishment is inflicted it knows not, but it learns to realize that it is an inevitable result of shirking its task, and not until this lesson is learned can it be considered as a thoroughly trained ferret. Such animals are extremely valuable, and cannot be purchased except at a very high price, whereas an untrained animal will only cost a few shillings.

When ferrets are employed in rat-hunting, they ought not to be muzzled, or even hampered with a string. Rats and rabbits are very different beings, and though a rat, recognising the better part of valour, will evade a fight as long as it can, it will, when escape is impossible, turn to bay, and be suddenly transformed into a most formidable enemy, not being content with defending itself, but unexpectedly assuming the offensive, springing upon the foe and inflicting terrible wounds with its chisel-like incisor teeth. My own special pet cat Pret, whose biography has long been before the public, was done to death by a combination of the rats which he felt it his duty to exterminate.

If, then, a muzzled ferret were suddenly brought face to face with an old and experienced rat which was standing at bay while his wives, his children, 'his sisters, his cousins, and his aunts' made their escape, he would be placed at such a disadvantage that he would execute a retrograde movement upon his base, and never again attempt to face a rat.

Again, both the rat and ferret are consummate tacticians by nature. The ferret tries to seize its prey as it can, and then gradually to work its way towards the back of the neck, and at last to drive its needle-pointed teeth into the open spot between the skull and the first vertebra of the neck, thus killing the animal in a moment. It is worthy of notice that the great bird-spider of South America, which feeds

on lizards, young birds, 'and such small deer,' kills its prey in exactly the same manner.

But the rat is equally aware of the one vulnerable point in its structure, and guards it as carefully as if it were Achilles, conscious of his vulnerable heel. The rat at bay backs into a corner, and sits up on its hind legs, keeping the back of its head protected by the corner. In one case a rat had been caught in a box-trap, and the captor, not knowing the peculiarities of the animal, very foolishly put a ferret into the same box. The ferret had no chance against the rat, the conditions being wholly in favour of the latter animal, which had four corners in which it could defend itself, while the ferret had no opportunity of getting at the only vulnerable portion of the rat. The result was that the ferret was so utterly demoralised that it never again would face a rat.

In point of fact, there ought to be two distinct sets of ferrets for the use of man, one set being trained to driving rabbits out of their burrows, and the other set being used exclusively in expelling the rat.

Supposing the otter to be sufficient for fish-catching, and the ferret for attacking the rabbit and rat in their own domains, why should not we utilize the stoat and the weasel?

In this country the stoat (*Mustela erminea*) is

useless for its fur, though in the more northern parts of the world it exchanges its ruddy summer coat for a beautiful suit of cream white, popularly known as ermine. Sometimes, during a severe and prolonged winter, our stoat becomes nearly as white as the ermine. There is now before me an English stoat in its wintry garment, which is almost as white as any ermine, the only dark portions about it being the black tip of the tail (which never loses its colour), and a small patch of ruddy brown just over the nose. Such instances are, however, so rare that the stoat can never be of any value to us as far as its fur is concerned. But it might be made useful after the fashion of the ferret, to which it is closely akin in form and habits.

Then there is the pretty little weasel (*Mustela vulgaris*), which might be employed in ejecting the mouse as successfully as the ferret is used in turning out the rat. Scarcely any animal is more easily tamed, and when in kind hands it becomes a most interesting pet, its only drawback being the powerful and disagreeable odour which, in common with many of the same family, it exhales.

The skunk of North America affords the most prominent example of this odour; but, when the glands which produce it have been removed, even the skunk itself becomes a most charming pet. Dr. Warren, of Beacon Street, Boston, Mass., showed me the stuffed skin of a skunk which had been chloroformed, deprived of its scent-glands, and lived

for some years in the house as a pet. The glands themselves are in a bottle in the same museum, and are of very great size in proportion to the body. . . .

I cannot, therefore, but think that the weasel might be trained to become a member of the household, and be taught to follow the mice in their holes, just as the ferret can follow the rat. Like the stoat, the weasel assumes a cream-white winter garb; also like that animal, it retains the colour of its tail-tuft, which, in the ermine, is jet black, but in the weasel is dark red.

We have also the badger (*Melex taxus*), by far the largest of our British weasels.

Perhaps the reader may share honest Dinmont's opinion, and wonder how anyone could 'care for a brock.' Then the badger has an evil reputation for its vile odour. This accusation, however, is quite without foundation, the burrow of the badger being perfectly clean and sweet. Of course, if it be shut up in a limited space, and never allowed to go out, the odour of its habitation is not at all agreeable. But the owner of the animal is to blame, and not the badger, which is a fastidiously clean animal, and suffers terribly from the condition of its prison-house. Mr. H. C. Barkley, who kept a badger for several years, puts this point very forcibly :

'There is a saying, "smells like a badger." This is a shameful libel on the cleanest beast I know. He has *no* smell if he is allowed his liberty, and can look after his sanitary arrangements himself. . . .

‘Then he has no parasites of any kind, and this makes him a splendid pet in this flea-infested land (Bulgaria). The greyhounds soon made friends with him, and long before he was full-grown he was their master, and could roll them over with the greatest ease. He never lost his temper with man or beast, and would take a bullying at any moment. He was omnivorous ; but the treat of his life was a lump of sugar, or, better still, a little honey. He slept under my bed all the time we were in the tent, and would follow me about like a dog.’

Mr. Barkley also narrates an unexpected service which was rendered by this animal to the inmates of the tent :

‘One morning we were surprised to see a French man-of-war in the harbour, and later on in the day we were honoured by a visit from the captain, who sat and chatted for an hour. No sooner was he gone than in walked a lieutenant, and, one after the other, all the officers of the ship. We were delighted to see these gentlemen ; but after all their visits had been paid over again within twenty-four hours, we began to wish we could say “not at home.”

‘Friend badger helped us out of this difficulty, for, while the captain was paying his third visit, it quietly climbed on a box behind his chair, and took a sniff at his locks, attracted, I suspect, by the smell of Parisian pomade. One glance was sufficient. Up jumped the captain, and wished us a hasty farewell, and we saw no more of him, as he evidently

did not relish the attentions of our ferocious-looking pet. All the other officers from this time were kept to the ship by duty—at least, I suppose so—for they paid no more visits.'—'Five Years in Bulgaria.'

Here, then, is a proof that even so unlikely a creature as the badger can be brought under the dominion of man, and that though at present it has not rendered services to man equal to those of the otter and the ferret, it can at all events become an affectionate and amusing companion to him.

CHAPTER IX.

THE CONQUEST OF THE DESERT.

Locomotion and civilization—Two uncivilized nomad races—The Bedouin of the desert—The Bedouin and the camel—Unintentional pioneers—Origin of the camel—Foot of the camel—Its endurance of hunger—Abstinence from water—Water-cells of stomach—Conflicting statements—Mr. Pollen's letter—The callosities—Various breeds of camels—The pack-camel and the riding camel—The heirie—Camels of the desert—Their fear of houses—The delights of camel-riding—General Loring and Miss Edwards—Dislike of hills—‘Splitting up’—Mr. Pollen's account—The camel in water—Crossing the river—The camel's kick—Camel's hair and camel's milk—An Arab feast—The camel in Australia—Interior of Australia unknown—The Australian deserts—Importation of African camels—A wonderful journey—Services of the camel in Australia.

NEXT to the ceaselessly urgent necessity for obtaining food comes the desire for locomotion, which is, in fact, the first stepping-stone to civilization.

I do not contend that locomotion necessarily produces civilization, as there are some races of man who lead more or less nomad lives, but who make their powers of locomotion wholly subservient to the procura-*l* of food.

Such, for example, are the Eskimos, who, as we have seen, are continually travelling from one spot

to another by means of their dogs. Yet they do not change their localities for the sake of coming in contact with other races, and exchanging commodities and ideas with them. They simply travel from one hunting-ground to another, and have no wish to meet any except themselves, lest they should find intruders upon the chase of the seals on which an Eskimo is absolutely dependent for life.

They want no commodities except those which the sea furnishes, and still less do they want new ideas. In consequence, they seem to have made no progress in civilization, and are, in all important respects, what were the ancient men of the caves, from whom Professor Boyd Dawkins shows them to be lineally descended. Much of this isolation is due to the climate in which they live, and to which they have become so completely inured through successive generations that they can scarcely form an idea of any life unconnected with ice and snow, or any happiness except an unlimited supply of seals.

Affording at the same time a contrast and an analogy to the Eskimo, there is another race of nomads which are ever travelling, and yet have made no progress in civilization for some thousands of years. These are the Bedouins of the desert, who have always carried out to the fullest extent the injunctions laid by Jonadab the son of Rechab upon his descendants nearly three thousand years ago :

‘ Ye shall drink no wine, neither ye nor your sons for ever ; neither shall ye build house, nor sow seed,



BEDOUIN CAMEL ON THE MARCH.



nor plant vineyard, nor have any, but all your days
ye shall dwell in tents.'

The necessary consequence of such a life, which has been continued unchanged for some thirty centuries, is that the desert Bedouins of the present day present a close analogy to the Eskimos, inasmuch that, though perpetually on the move, they have not advanced a single step in civilization. Like the Eskimos, they cannot even be termed a nation, being little more than an aggregate of independent families, acknowledging no common superior and obeying no recognised authority of any kind. Yet, indirectly, just as the Eskimos have done under exactly opposite conditions, they have unintentionally prepared the way for civilization by furnishing the necessary means of transport. The Eskimo has in the course of ages educated the dog, and the Bedouin has similarly trained the camel, both animals being now used by the agents of civilization.

The camel, indeed, forms the only means of transport across the desert, and even at the present day, if the camel were to be extirpated, the progress of civilization would be materially checked.

See what a country it is which is inhabited by the tent-dwelling Bedouins, a people as remarkable in their way as the cave-dwelling races of prehistoric times! Vast tracts of sand—nothing but sand as far as the eyes can reach. Small and precarious supplies of water at several days' journey from each other. No green herbage on which to feed the beasts, and often

for days together no food except that which is supplied by dead thorn-bushes, from which not even the thistle-loving donkey can extract any nutriment.

Yet in the wonderful beast which is known as the camel we find the means of overcoming all these difficulties. The burning sand into which the hoofs of the horse would sink, and be scorched besides, are the natural pathway of the cushion-footed camel.

By a provision of Nature which will presently be mentioned, the camel can dispense with water for a more or less lengthened period, and its teeth can masticate and its stomach digest even the dead and dried thorn-bushes that stud the desert, and are of little use to travellers except as furnishing a quickly burning fuel. Hence the surprise of Moses on seeing a very common sight—*i.e.*, a dry thorn-bush on fire—converted into a very uncommon sight—*i.e.*, the bush burning but unconsumed. So potent is the internal chemistry of a camel's stomach in extracting nutriment from the most unpromising materials, that it has been well said that if a traveller in the desert were to take with him a saw and a spoke-shave, he could on an emergency feed his camel on shavings of the saddle.

Then the long legs and neck of the camel lift the head high above the glare of the desert, over which the waves of heated air roll like those of the sea, and delude the unwary traveller into an idea that water is at hand. The nostrils, like those of the seal, are linear, for the purpose of excluding the

drifting sand, just as those of the seal are intended to exclude the water.

Moreover, the 'hump,' which forms so characteristic a portion of the animal, affords a remarkable provision against hunger. It is composed of vesicles of fat, bound together with membranous fibres crossing and recrossing each other in all directions. It is only formed when the animal is in the best condition, and if the supply of food should fail, it is gradually re-absorbed into the system, thus taking



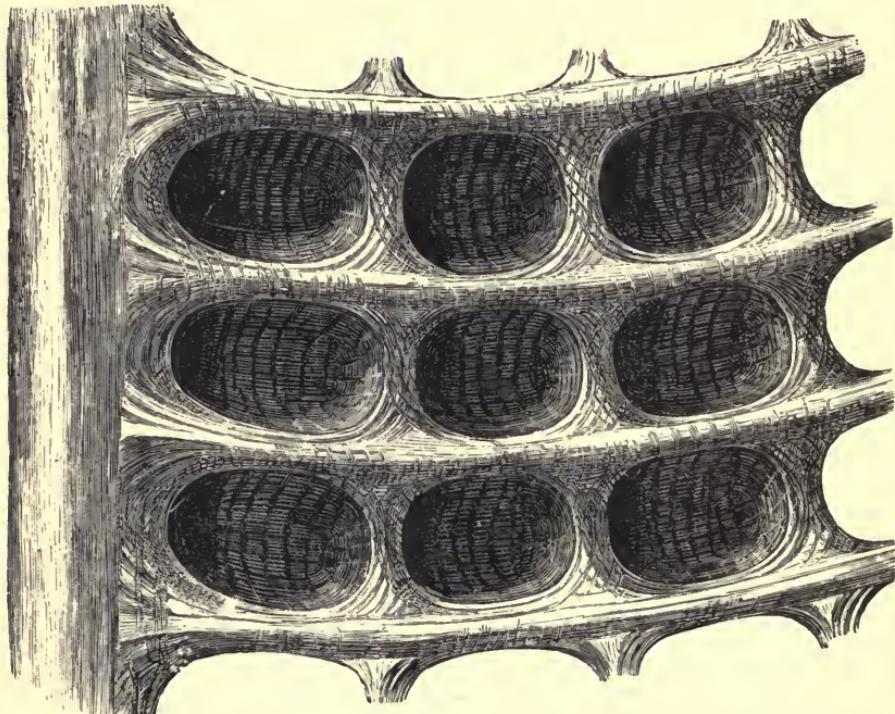
FOOT OF CAMEL.

the place of food, just as is the case with the fat-supply of hibernating animals. No Arab will buy a camel in which the hump is deficient, neither will he undertake a long journey until he has satisfied himself that the hump is full and firm.

The feet, too, are constructed in a very peculiar manner. Like those of other ruminating animals, they are divided, but the hoofs are reduced to two nail-like projections, the balls of the toes being developed into two large, soft cushions, which spread

when the weight of the animal bears upon them, and so are admirably adapted for walking on loose sand.

A still more wonderful provision is that which enables the camel to exist for a long period without drinking. Like other ruminants, the stomach of the camel is compound. That of most ruminants is



WATER-CELLS OF PAUNCH.

divided into four compartments, while that of the camel has only three. But whereas in ordinary ruminants the paunch, or first division of the stomach, is a mere bag for the reception of food, it contains in the camel a number of cells which are so constructed that when filled with water they can be

closed, and opened only when necessary. The second division contains similar cells which can, independently of the water which is drunk in the ordinary manner, contain a reserved store of about a gallon and a half.

Whence was the origin of the camel? How did it come to be 'differentiated' in so remarkable a manner? We simply have no answer to these questions. The camel is absolutely unknown except as the servant of man, and it is evident that it indirectly owes its present structure to the human influence which has been brought to bear upon it for successive centuries, the Arabs selecting those animals which possess the greatest share of the qualities necessary for desert life. No perceptible change has, however, taken place within historical times, as the camels which are delineated upon the ancient monuments are exactly like those of the present day. A corroboration of this theory may be found in the very conflicting accounts which are given by travellers regarding the animal's power of abstaining from water. Some writers state from their own experience that the camel can go without water for five or six consecutive days, while others deride such statements as gross exaggerations, and say that a camel must be watered every other day to keep it in working condition.

As is often the case in controversy, both disputants are right. There are camels and camels; and, while one traveller has been brought into

contact with the camel of the desert, the other has only had experience of the Egyptian camel, which is a totally different variety. The Soudanese camel has, like its master, been born of a race which has been trained for many successive generations to live on the very smallest modicum of food and water, while the Egyptian animal has a comparatively bountiful supply of both. Even when it gets nothing to eat but the thorn-bushes which have been already mentioned, the Soudanese camel can, after it has filled its water-pouches to the utmost, go for five or six days without needing water. Should it come upon a supply of living—I can scarcely say green—food, it can live for double the time without needing to drink.

Mr. J. H. Pollen, who followed the track of the Mecca Pilgrimage, told me in a letter of the endurance of the desert camel: 'I have taken camels for eleven or twelve days without a drop of water. All of them did not drink even when we came to water, nor did any drink a large quantity, or seem disturbed by the want of it, though the sun was very powerful, and we travelled twelve or thirteen hours daily.' These camels had nothing to eat but 'small, dry, drab-coloured plants, thorny and otherwise; so the camels continued to crop as they walked, jostling the rider not a little.'

Another attribute beside endurance of hunger and thirst is required of an animal which assists the Bedouin in his ceaseless journeyings through the

desert. It must be capable of carrying heavy burdens for many consecutive hours.

The dog of the North needs no such powers. It can drag moderately heavy weights over the smooth surface of the snow; but not nearly so heavy or so cumbrously large as those which are necessary for the Arab. The Eskimo need not carry any house on his travels, as the snow over which his sledge is drawn furnishes at his journey's end the material for a house, which he can build in a few hours. But the Arab requires a tent for shelter; and a tent which is large enough to accommodate an entire family is, together with its poles, a heavy and very cumbrous burden, even when packed by practised hands. One camel, however, can carry such a tent, together with its poles, and the very small modicum of furniture and cooking implements which are necessary for these wandering tribes.

Another characteristic portion of the structure which enables the camel to assist man in the Conquest of the Desert is to be found on the limbs and breast.

Owing to the height of the animal, it must necessarily lie down to be mounted or loaded, and must spend much time with its legs doubled up under the body, the chief weight of the front part of the animal resting on the breast, and the limbs folded after a fashion which has by more than one traveller been compared to the closed blades of a pocket-knife.

In order to enable the creature to maintain this

attitude without injury to the points on which the weight rests, they are protected by certain pads of hardened skin. These 'callosities,' as they are termed, are placed on the chest, the 'knees'—*i.e.*, the true wrists—the elbows of the fore limbs, and on the knees (called in the horse the 'stifle joints') and hocks of the hind legs. They are scarcely perceptible in the newly-born camel, but are rapidly developed, as is noticed by Lady Anne Blunt in her 'Pilgrimage to Nejd':

'A camel foal was born to-day by the well. I went to look at the little creature, which was left behind with its mother when the rest were driven home. I noticed that it had none of those bare places (callosities) which the elder camels get on their knees and chest from lying down, and that its knees were bruised by its struggles to rise. We helped it up, and in three hours' time it was able to trot away with its mother.'

Here, again, is an example of the influence exercised by man on the structure of his servant, the camel.

Again, just as we have various breeds of horses for the various purposes of life, so the Arabs have various breeds of camels, there being as much difference between them as there is between the cart-horse and the race-horse. The ordinary pack-camel is a slow-paced animal, scarcely exceeding two and a half miles per hour, though it can keep up this steady pace for a long time, and travel on an average twenty miles per diem.

But there is a special variety of the camel called the Heirie, which is bred exclusively for speed, and which can travel for eighteen or twenty hours successively, at eight or nine miles per hour. There are but few riders, however, who can endure the tremendous exertion ; and even the hardiest and most experienced rider is forced to bind his body as tightly as possible with leather straps before he ventures to start on a long journey.

The 'Ships of the Desert,' as these camels are poetically termed, are, like their owners, horribly afraid of any human habitations except tents, and display unconquerable terrors even at the approach to a city. In 'Eothen,' a very striking example of this repugnance is given. The author had engaged an Arab, named Selim, to take him and his party into Gaza, Selim furnishing the necessary camels and their attendants. Arabs have not the least forethought, and neither of them took into consideration what the state of their feelings would be at the expiration of a week or ten days.

Selim, the chief of the party, and the man to whom all our camels belonged, was a fine, savage, stately fellow. There were, I think, five other Arabs of the party ; but when we approached the end of the journey they one by one began to make off towards the neighbouring encampments, and by the time that the minarets of Gaza were in sight, Selim was the only one who remained. He, poor fellow, as we neared the town, began to discover the

same terror that my Arabs had shown when I entered Cairo. I could not possibly accede to his entreaties, and consent to let my baggage be laid down on the bare sands without any means of having it brought on into the city.

‘So at length, when poor Selim had exhausted all his rhetoric of voice, and action, and tears, he fixed his despairing eyes for a minute upon the cherished beasts that were his only wealth, and then suddenly and madly dashed away into the farther desert.

‘I continued my course, and reached the city at last ; but it was not without immense difficulty that we could constrain the poor camels to pass under the hated shelter of its walls. They were the genuine beasts of the desert, and it was sad and painful to witness the agony that they suffered when thus they were forced to encounter the fixed habitations of men. They shrank from the beginning of every high, narrow street, as though from the entrance of some horrible cave or bottomless pit ; they sighed and wept like women. When at last we got them within the courtyard of the khan, they seemed to be quite broken-hearted, and looked about piteously for their loving master ; but no Selim came.’

In fact, he was so frightened that he never came back at all, and the hire of the camels was at last paid to a local sheyk in trust for Selim. Now, there are plenty of camels, as well as plenty of Arabs, to whom the streets of a city convey no terrors ; but

I have quoted this passage in order to show how the characters of the camel and its master re-act upon each other before man can achieve the Conquest of the Desert.

Up to this time, we have not gone into details, and have in consequence only seen the poetic side of the 'Ship of the Desert.' But when we deal with the details of every-day life with the camel, we find that the animal, like the 'noble savage,' is only poetical at a distance. In private life the camel is the most prosaic of beasts, and a near acquaintance effectually expels every illusion. It is essentially a stupid, ill-conditioned, and absolutely selfish animal ; spiteful to a degree, and, when near, offensive to more senses than one. An Arab riding a camel is certainly a picturesque object ; but no one that I have met, and no one whose personal experiences I have read, has any idea of camel-riding except incessant discomfort, almost amounting to torture. Here is a personal narrative by General Loring in his 'Confederate Soldier in Egypt' :

'A Bedouin, by divers jerks, first succeeds in coaxing or forcing the animal down on his knees, with a snap like that of a double-bladed jack-knife. While a second holds his head away to keep him from biting, another ties his fore-legs together ; and then, to secure them, stands upon them, inviting you to mount, and fix yourself in the execrable saddle. In the meantime, the dromedary is uttering the most agonizing cries of distress.

‘Suddenly, the Bedouin looses the strap, and bounds from the animal’s legs ; another terrible grunt, and you discover that you are on the top of this living machine, waiting patiently further developments, with your hands grasping the horns in front and rear. The animal raises his fore-quarters with a bound, and this sticks the front horn into your stomach, while you are pressing upon it to keep in a horizontal position. That done, up go the hind-quarters with another jerk, and this time the rear horn sticks you in the back. You are only too glad to get the rear punch in token of the completed business.

‘While the animal was opening his hinges, I was thoroughly impressed with the dizzy height of several hundred feet. It is best not to strike the beasts too much ; for, if beaten, they are certain to stand still, and deliberately turn their long necks and try to bite a piece out of your legs. It then becomes necessary to stick to them, in order to avoid their fury, until, by gently patting, they are made to move on amicably again.

‘Their walk is rough ; but they trot with comparative ease, carrying the head up, and tail straight in the air, and looking very gay as they rapidly move along. . . . But, in making this swift passage through the heated air, reflected from the burning sands, you are literally roasted ; and rubbing and twisting your loins, and galling your hands in the effort to hold on, makes dromedary-riding a painful operation to those not accustomed to it.’

The use of the word 'dromedary' requires a brief explanation.

There is a popular belief that the camel has two humps and the dromedary only one. Whereas, the two-humped camel is a totally different species, inhabiting another part of the world, as we shall presently see. The true camel has but a single hump; but, as has already been mentioned, there are several varieties. These may be practically reduced to three—namely, the ordinary pack-camel, which is used for transport; the lighter breed, called the dromedary, which is used for general riding purposes; and the swift dromedary, called the heirie, which is mostly employed by official messengers or Arab robbers. They may be compared to the cart-horse, hack, and race-horse of our own country.

General Loring's account evidently refers to the heirie. Here is Miss Amelia Edwards's description of riding the dromedary, which is not more complimentary to the camel than the preceding narrative. After giving her account of the successive shocks endured while the camel rises, she proceeds as follows :

' His paces are even more complicated than his joints, and more trying than his temper. He has four—a short walk, like the rolling of a small boat in a choppy sea; a long walk, which dislocates every bone in your body; a trot, which reduces you to imbecility; and a gallop that is sudden death.

' One tries in vain to imagine a crime for which

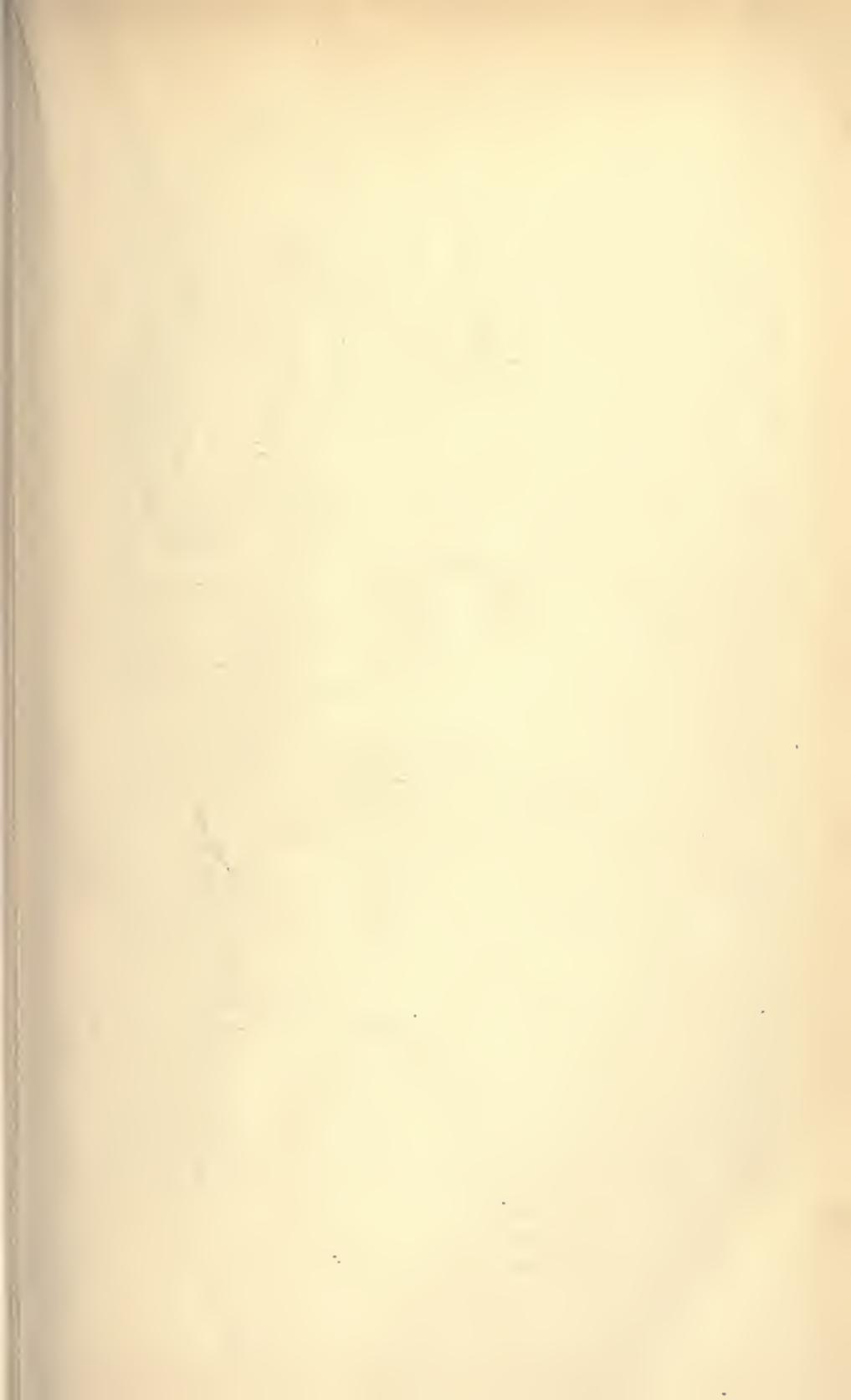
the *peine fort et dure* of sixteen hours on camel-back would not be a full and sufficient expiation. It is a punishment to which one would not willingly be the means of condemning any human being—not even a reviewer. . . .

‘ The camel has his virtues ; but they do not lie upon the surface. Irreproachable as a beast of burden, he is open to many objections as a steed. It is unpleasant, in the first place, to ride an animal that not only objects to being ridden, but cherishes a strong personal antipathy to his rider. Such, however, is his amiable peculiarity. You know that he hates you from the moment you first walk round him, wondering where and how to begin the ascent of his hump.

‘ He does not, in fact, hesitate to tell you so in the roundest terms. He swears freely while you are taking your seat ; snarls if you but move in the saddle ; and stares you angrily in the face if you attempt to turn him in any direction save that which he himself prefers. Should you persevere, he tries to bite your feet. If biting your feet does not answer, he lies down.’

Referring to the camel’s great dislike to anything approaching a hill, she proceeds as follows :

‘ Nor were the camels themselves less emphatic at being forced to ascend a mound. They grinned ; they sniffed ; they disputed every foot of the way. As for mine—a gawky, supercilious beast, with a bloodshot eye and a battered Roman nose—I never



PLOUGH CAMEL.



heard any dumb animal make use of so much bad language in my life.'—*A Thousand Miles up the Nile*.

In refusing to ascend the mound, however, the camels had some reason on their side. The camel is essentially a traveller on level ground, and its structure is not in the least adapted for hills. Indeed, if it should be forced to travel on ground which is at the same time hilly and slippery, especially if it be wet, the animal becomes absolutely helpless, and is apt to 'split up'—an irremediable misfortune which sometimes occurs even on level ground when it is slippery. The hind feet slide apart, like the feet of a beginner on skates. The camel has no power to bring them back, and the weight of the body combined with that of the load continues to force the limbs asunder until the thigh-bones are dislocated at the hips. It is impossible to set the joints, and the kindest thing that can be done for the wretched animal is to shoot it as soon as the feet begin to slide apart.

Mr. Pollen, in another part of the same letter which has already been quoted, mentions this unfortunate incapacity of the camel to recover itself when slipping :

' Between Cairo and Suez I saw more than one camel dead or dying. They seem very tenacious of life, as they remain unable to rise from a broken limb, or any other cause, for very many days. I more than once wished to go up and shoot the poor

creatures, to put them out of their misery ; but the Arabs have superstitious notions on this point, and would not suffer it. I did once find a camel that had been stabbed by its master, and once only. The poor beast had been exhausted, and the long, broad dagger struck into his heart. It must have been a very short time before I reached the spot, as the blood was almost fresh.'

That a spiteful camel will bite when it can do so is a fact that has been mentioned by almost every writer on the subject. But I only remember one instance where a traveller has described another mode of venting its ill-temper, and that is by its kick. Mr. J. F. Keane gives a most graphic account of this mode of offence :

'The camel's kick is a study. As it stands demurely chewing the cud, and gazing abstractedly at some far away object, up goes a hind-leg, drawn in closely to the body, with the foot pointing out. A short pause, and out it flies with an action like the piston and connecting-rod of a steam-engine, showing a judgment of distance and direction that would lead you to suppose the leg gifted with perceptions of its own, independent of the animal's proper senses. I have seen a heavy man fired several yards into a dense crowd by the kick of a camel, and picked up insensible.'

Deep water, especially that of a river, is even more objectionable to the camel than hilly ground, the animal being said to be the only mammal that

cannot swim naturally. As soon as the water is deep enough to lift its body, it, if untended, loses all command over itself, rolls over, and allows itself to be carried away by the current, without even attempting to save itself. Yet the Bedouins, who have a natural gift for managing the camel, contrive even to pilot this most unsatisfactory animal across a wide stream. An example of their skill is narrated by Lady Anne Blunt in her 'Pilgrimage to Nejd' :

' By the khan's advice we let the Bedouins manage the business, which, I must say, they performed with no little courage and skill.

' It takes two men to swim a camel safely. First of all the beast must be unloaded to the skin. Then a cord is tied to the tail for one man to hold by, and another mounts on the animal's back. Thus he is driven into the water, and pushed on gradually till he loses his legs. The man on his back then floats off down stream of him, and, holding with one hand to the hump, splashes water in the camel's face to keep his head straight, while the other urges him from behind. The camel seems heavier in the water than most animals, showing nothing but the tip of his nose above the surface, and he is a slow swimmer.

' It was an anxious quarter of an hour for us while they were crossing the Kerkha, and great was the speculation among the bystanders as to the result. " Yetla!" " Ma Yetla!"—" He does it!" " He doesn't!"—were the cries as they were carried down the river. The strongest pushed fairly across; but

those in the worst condition seemed borne helplessly along, until camel and men and all disappeared out of our sight. We had already given them up as lost when we saw them emerging on the bank quite a mile down stream.'

The camel is even more useful to the Arab than is the dog to the Eskimo. The dog is invaluable as a beast of traction ; but there its services end, as it does not even assist in procuring food.

But the camel is to the Arab what would be the dog and seal combined to the Eskimo, as it not only bears its owner over the desert sands, but supplies him with shelter, food, and clothing. The camel is covered with a coating of hair which in the winter becomes very long and thick. At the approach of summer it falls off, and is replaced by a shorter and thinner suit. As soon as the winter's coat loosens it is pulled off by the women, and spun into the thread with which the tent coverings and the huge mantles of the men are made. The garment of camel's hair worn by St. John the Baptist was the usual costume of those who, as he did, lived in the desert.

The milk, too, forms an important part of the Arab's diet, and, like the 'masi' of the Zulus, is eaten when curded, and seldom drunk fresh. Even the meat is occasionally eaten when some very wealthy chief gives a young camel to his guests as material for high festival. On such occasions the guests sit and gorge themselves to an extent that

astonishes those who are not aware that the Arab is only abstemious by compulsion.

By far the most wonderful conquest of the desert is that which was achieved about twenty years before these lines were written.

Australia had been rescued from its previous condition of being a mere hunting-ground of savages so debased that they had no idea of tilling the ground, could not even build a hut, and still less make a tent. Herds of cattle, flocks of sheep and troops of horses had been poured into the new continent, so that within a few years the unproductive waste had been converted into a vast storehouse of food and clothing.

Mightily as the dominion of man had asserted itself up to a certain point, it sustained a check in its progress which bade fair to rob Australia of half its value. Scarcely anything was then known of that continent except a mere ribbon, so to speak, of territory round the coasts. Nothing whatever was known of the interior, and, considering the absolutely different physical conditions of Australia and any part of Europe, Asia, Africa, or America, investigators had no *data* on which they might direct their movements.

All that could be ascertained was that the aborigines were never at a loss for food and water in districts where white men perished from hunger and thirst.

The mouths of rivers were easily discovered ; but the courses which they traversed were as absolutely unknown twenty years ago as the source of the Nile was when George III. was king. Any traveller towards the interior found his way barred by trackless deserts which prohibited the intercommunication which is the most essential of all civilizing agents.

What, then, was to be done ? Here in Australia is a state of physical conditions precisely like those which formerly made the Sahara a far more effectual barrier to traffic than the widest oceans. Yet the desert of Africa has been conquered, and the desert of Australia may be subjected by the same means.

The bold idea was therefore conceived of transporting the camel from Africa to Australia, and using it as a means of crossing the desert. This was done in 1866, when Sir John Elder landed at Port Augusta one hundred and nine camels carefully selected from the best desert breeds. The experiment was wonderfully successful, the animals treating the desert of Australia exactly as if it had been the sand of Africa.

On one journey they travelled for nine consecutive days without water, and having no food but that which they obtained from the dry bushes which grew along their track. Camel caravans soon were formed, the animals not only acting as beasts of burden, but being harnessed to waggons like oxen.

Without these camels it would have been impossible to lay the Adelaide and London telegraphic line in 1872; and in 1881 they saved the lives of the starving population of the Albert Gold Fields.

CHAPTER X.

THE CONQUEST OF THE HORSE.

The horse a conquered animal, unlike the dog and camel—Its wild instincts—The ‘mustang’ of the prairie—The ‘brumbies’ of Australia—The ‘tarpan’ of Tartary—Exmoor ponies—Their nervous disposition—Origin of the horse—Successive developments of form—Pre-historic man and contemporary animals—The pre-historic horse—Date of the horse’s servitude—Uses of the horse—War—The chariot—Equites—The mule used for clerics—Field of the Cloth of Gold—The chariot of Egypt—Rameses II.—Bearing-reins—Egyptian horsemen—Lack of the saddle—The horse of Homeric times—Chariot-races of Greece and Rome.

I USE the word conquest advisedly.

The dog was never conquered. He needed no conquest, but voluntarily attached himself to man, and is never found except as the companion of man. Similarly the camel is, as has been shown, an artificial animal, owing its form and structure to the ceaseless influence of man and climate through countless centuries. As for the predacious assistants of man, more especially those of the hawk, cat, and weasel tribes, we cannot be said to have conquered them. We have entered into temporary alliances with some of them ; but even the domestic cat is perfectly

independent of her so-called master, and takes every means of asserting her independence.

The horse, however, must be placed in quite a different category. Whenever, in a thinly populated country, man neglects the horse, the animal temporarily reverts to the habits of its ancestors, associates in herds, and leads a tolerably independent life, still retaining its capability and even willingness when captured to acknowledge man's dominion and obey his commands.

Such, for example, are the herds of wild horses which inhabit the prairies of America, and are called by the name of 'mustang.' These, however, are nothing but the offspring of horses which were abandoned by their owners in times past, and which have practically become as wild as the stock from which they sprang in pre-historic times.

The same result has taken place in horses which have run wild in Australia, where they are called 'brumbies.' They, like all acclimatized animals that cannot be kept under constant control, have increased inordinately in numbers, and have, in many cases, become terrible nuisances. The damage which they do is not confined to their trespassing on cultivated ground; but they inflict serious injury upon the stock-farmers, men who expend much time, money, and energy in cultivating special breeds of horses. The brumbies have a habit of sweeping down on the stock-farms and explaining to the horses the superior charms of a wild life. In this way they

contrive to entice away some of the very best horses, and even if they should be recovered, the purity of the breed, and the consequent value of the stock, are seriously imperilled.

Even in the few years which have elapsed since horses were introduced into Australia, and the still fewer years which have passed since the brumbies became obnoxious, they have deteriorated so rapidly in personal appearance that they have been characterised by Mr. Anthony Trollope as being marvels of ugliness. Their increase in numbers has been so rapid that their destruction was absolutely necessary, and, in a single year, seven thousand brumbies were shot in one station, and even after that slaughter they were by no means exterminated.

It was at one time thought that the 'tarpan,' or semi-wild horse of Tartary, which has already been mentioned, is the original horse from which all the different varieties descended. But there is now but little doubt that the tarpan is itself the offspring of horses that have escaped from domestication, and, as we have seen, it is constantly captured and forced again to submit to the dominion of man.

Even in our own country there are herds of horses which are practically wild, and which display all the habits of the wild animal. These are the celebrated Exmoor ponies, whose speed and activity are always the wonder of those who see them for the first time as they dash up and down the steep, stony valleys which go by the name of 'coombs.'

These ponies have been well described by one who knows them practically:

‘The beautiful Exmoor ponies are a marked feature of Exmoor and its neighbourhood. They are a breed of very handsome, very spirited, tiny horses ; their shape is perfect, and their action leaves nothing to be desired. . . .

‘They are not by any means easy to ride, for they are remarkable for a wriggling, rapid way of moving, and they shy badly at the smallest provocation, seeming to see a ghost in every shadow, and to hear a lurking brigand in every faintest rustle. Their wild life on Exmoor, and the equally wild life of their ancestors for many generations, have no doubt produced these habits.’

Neither are they easy to drive, as I know from experience. A clerical friend of mine possesses one of these ponies, whose life is mostly spent in going to and from the church, which is about a mile from the vicarage, or to and from the two railway-stations which are nearest to his master’s residence. There is not a post, or a tree, or a gate which he does not know well, and yet I have never sat behind him without his shying at one or all of these objects, while nothing can induce him to keep an even course instead of starting first to one side of the road and then to the other, or sometimes stopping or even backing, as seems to him best. Those who know him take his proceedings as a matter of course, but to those who sit behind him for the first time his

vagaries are sufficiently startling. I cannot but think that Mr. Garland's erratic pony Whisker must have come from Exmoor.

None of these wild horses attain to any great dimensions, and, indeed, they are all considered as ponies. The larger varieties of the horse, such as the gigantic animals which are employed by our brewers, railway companies, and many firms whose service demands great size and weight in their horses, are only obtained by constant care on the part of the breeders.

Though we know comparatively nothing of the origin of the camel, we do possess some information concerning the gradual development of the horse.

The earliest horse-like animal of which we have any knowledge existed in the early eocene time epoch, and is therefore called the *Eohippus*, *i.e.*, the dawn of the horse. It was quite a little creature, not larger than a fox, and had four complete toes on the fore feet, and three toes on the hind feet. It had also the rudiments of a fifth toe (the thumb) on the fore feet.

Several successive forms appeared in the later eocene and early miocene epochs, each form increasing in size and losing certain joints of the feet. Then, in the later miocene, we find an animal which could not be mistaken for anything but one of the horse-tribe. It is sometimes called *Anchitherion*—*i.e.*, an animal approaching the horse; or *Miohippus*—*i.e.*, the miocene horse. Then, in the pliocene

epoch, the anchitherium developed into the Hipparion, which was nearly as large as a Shetland pony, but still retained three toes on the feet. Last of all comes the true horse, an animal which, as has been well said, is, 'next to ships, a prime means of the diffusion of civilization.'

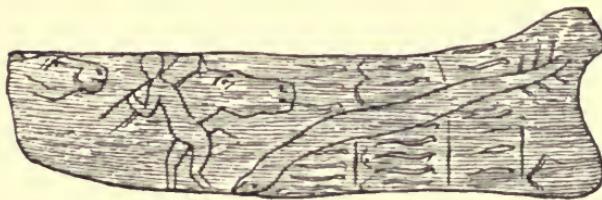
Deeply interesting as the topic is, I do not intend to enter into the structural modifications of the horse's foot and the homologies of the different joints. Space is limited, and the gradual development of the animal has only a collateral bearing on our subject. It is true that without these 'differentiations' the horse would have been comparatively useless to man. But it must be remembered also that man had no share in producing them, they having been completed before he existed. They are therefore outside the province of this work, which treats only of animals as far as they are subject to the dominion of man.

Again we are fortunate in our information regarding the development of the horse. After this epoch geology ceases to give us any information. But just at this very point pre-historic man steps in and supplies us with the desired knowledge.

Though little more than a savage, if not quite one, he was, fortunately for us, a born artist of astonishingly graphic power, especially considering the materials with which he had to work. Instead of pencil, graver or chisel, he had nothing but fragments of broken flint and stone. Instead of paper,

canvas, or metal plate, he had only the bones and tusks of the animals which he had killed. Yet with such utterly defective means he executed engravings and sculptures of which our best artists might be proud, so true are they to nature, and so free and telling are the outlines, breathing the very spirit and catching even the passing attitudes of the animals which are represented.

He seemed almost to revel in difficulties, one of his favourite subjects being the reindeer, with the complicated ramifications of its antlers. From his



PRE-HISTORIC HORSES.

accuracy in representing animals which still survive, we are justified in trusting to his delineations of animals which have perished.

Chief among them are the mammoth and the horse. There is the mammoth, with its long, curved tusks, flexible proboscis, and long, shaggy hair hanging from its shoulders, exactly as they appear on specimens lately discovered. Then there is the horse, of which we find several representations. It is a small, light-limbed creature, with a thick and clumsy head, apparently much too large for the body, and being exactly the type which Anthony

Trollope called a marvel of ugliness. The mustang of America also inclines to the same type.

At this point, man enters into the life-history of the horse. It is evident that the primitive horses were not employed as the servants of man, but were simply hunted and eaten like any other game. But as soon as we enter the domains of history we find that man has made conquest of the horse.

Until comparatively modern times, the horse was used solely for the purposes of war. In the most ancient of the Scriptural books the horse is mentioned as essentially an adjunct of war, the ass or mule being employed for riding purposes, and the ox for agriculture. Even in warfare the horse was seldom mounted, but was harnessed to the chariot, which had the double office of carrying the armed warriors, with their bows and javelins, and of breaking through the enemy's ranks by the sheer weight of the impetus. Even when the horse was ridden in warfare, it was not at first used like the cavalry of the present day, but was simply used for conveying soldiers from one spot to another with as much speed as possible—like the resuscitated 'mounted infantry' of the present day.

The intimate connection of the horse with warfare has lasted until modern times. For example, a distinguished warrior was rewarded by being dubbed a knight (German 'Ritter')—*i.e.*, *eques*, or horse-

man. Ecclesiastics were forbidden either to bear arms or to ride upon a horse. In the celebrated bas-relief representing the Field of the Cloth of Gold, all the warriors are on horseback. But Cardinal Wolsey, though surrounded with pomp scarcely less than that of either monarch, is shown as riding upon a mule, as is the case with all his ecclesiastical attendants.

The Egyptian monuments contain many representations of the horse. It is invariably depicted as engaged in warfare, and never in agriculture or any of the pursuits of peace. Except in very rare instances it is shown in connection with the war-chariot, a pair of horses being harnessed to each chariot, one on either side of the pole. The chariot was always two-wheeled, hung very low, and open at the back, so as to allow the rider to spring into or out of it even when it was driven at full speed. Our modern milkmen's carts are made on much the same principle.

Generally, the chariot was occupied by two persons only, one being the driver, and the other the warrior. Sometimes, when the warrior was a man of high rank, there was a third rider—namely, the shield-bearer—whose sole duty was to guard his master from the enemy's weapons, and so to leave him with both hands at liberty to wield the bow and arrow, these being essentially the weapons of the Egyptian nobles, the bow-case and quiver being covered with costly ornaments.

The chariot seems only to have contained a single seat, which was fixed inside and in the very front, so that the rider sat with his back to the horses. In this attitude we see Rameses II. seated while receiving the official accounts of the battle which he had just won. The same warrior-monarch is also repeatedly depicted as standing in his war-chariot, which is being driven with headlong speed, while he sends his arrows among the flying enemy.

Sometimes we see him standing in his chariot of state, the horses pacing proudly along, and the ostrich-feathered fans of his rank borne by attendants on foot. In connection with these wonderful memorials of ancient days, one point deserves notice as showing the careful fidelity of detail which distinguishes Egyptian art.

Of perspective they seem either to have known nothing, or to have deliberately ignored it in favour of conventionality. For example, although the face of all human beings is invariably shown in profile, the eye is as invariably drawn as if seen from the front. Several native artists and sculptors depicted Rameses II. in the different periods of his life, and drew the profile with such exactness, that they showed the same countenance, as it gradually changed from its likeness to his gentle father Seti, to the stern, impassive features of the conqueror of many nations. Yet, though the profile has been rendered with such truth that its fidelity can be

tested by the mummies of father and son, the eyes are represented conventionally.

The same scrupulous fidelity of detail is shown in the representations of the harness. I regret to say that the bearing-rein was used by the ancient Egyptians. But it seems to have been employed only in the state chariots, when but little exertion was demanded from the horses. When the chariots are depicted in full tide of battle, the horses are not hampered with the bearing-rein (characteristically termed in America the 'check-rein'); and the action of the horses is a free, unconstrained gallop, quite different from the stiff, proud march of the steeds which draw the chariots of state.

On the same monuments there are also represented men riding on horseback. But they are of a different race, are clothed in rather long and tight white garments, and are always represented as vanquished foes trying to make their escape. I believe that no painting or sculpture has yet been discovered which represents Egyptian cavalry, though we may be sure that had such a force existed it would have been figured.

It is worthy of notice that even in Homeric times the horse seems to have been exclusively used for drawing the chariot; and even in much later days, when the great Isthmian games were quinquennially celebrated at Corinth in honour of Neptune, to whom the horse was especially dedicated, we find no mention of the horse as separate from the chariot,

as would certainly have been the case if cavalry had formed an important arm in military affairs.

In still later times—under the Cæsars—the chariot-races at Rome attained an importance little secondary to warfare, and the winner received public honours as if he had been a general in command of a victorious army. The whole city was torn to pieces by contentions about the colours of the charioteers, and large fortunes were lost and won on a single race. Yet no one, either in Egypt, Greece, or Rome, ever seems to have thought of riding races any more than of improving the clumsy, springless chariot with which the horse was encumbered, and which retained its cumbrous, though certainly picturesque, form for more than two thousand years, and in various parts of the world.

CHAPTER XI.

BREEDS OF HORSES AND HORSE-TRAINING.

The Arab horse—The English race-horse and the Arab—Conditions of life—Joint property in an Arab mare—Comparative values of the mare and horse—The chief breeding establishment in Arabia—Lady Anne Blunt's visit to Haïl—Mohammed ibn Rashid—Mode of training an Arab horse—Points of the Arab horse—The head, tail and legs—Colours of the Arab horse—No black, roan, piebald or dun horses—Difficulty of obtaining mares—Story of Ariel—Egyptian and Assyrian horses of the Arab breed—Pharaoh's war-chariot—An Egyptian rider—Horses of Nineveh—Tail-ornaments—The Assyrian horseman—The Assyrian stable and groom—The Assyrian war-chariot—Lion hunting—Wild bull hunting in chariot—North American Indians—Modes of bringing the horse into subjection—Horse-breaking by these natives—‘Buck-jumping’—The Comanches and their equestrian powers—Disappearing on horseback—A Comanche on foot—The Araucanians as horsemen—Their awkward walk.

ANOTHER question now comes before us. What kind of horse was it that was harnessed to the chariots of the ancient Egyptians? Judging from the pictured representations, we may be tolerably certain that it was much like the ordinary Arab horse of the present day, and, indeed, was probably obtained from Arabia.

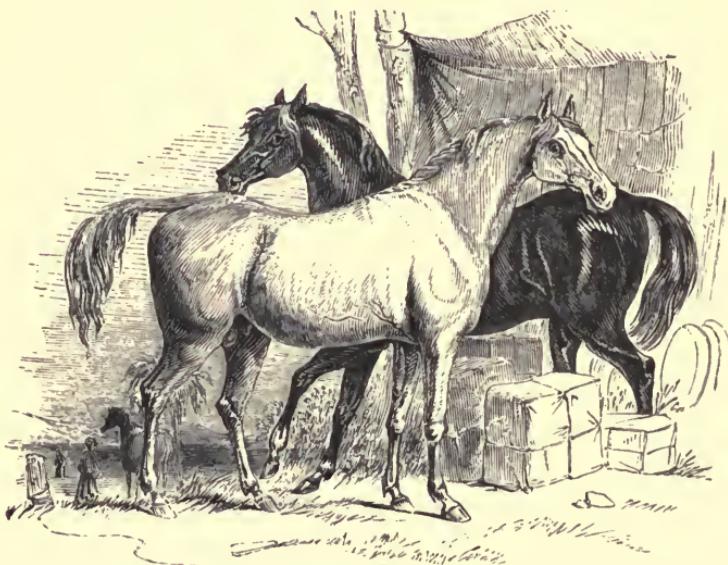
There is no doubt that even at the present time the purely-bred Arab is the finest horse in the world, and everyone is aware that our present breed of racehorses owes its excellence to the admixture of Arab blood.

Just now there is a fashion of depreciating the Arab and lauding the superiority of our race-horse. That on an English ground the best Arab might be beaten by a third-rate race-horse is true enough; but it must be remembered that the race-horse is as artificial a production as the course on which he runs. The ground is of turf, there are no obstacles to be overcome, and the distance is so short that it is run in a few minutes.

These external conditions are directly opposed to those under which the life of the native Arab horse is passed. Suppose the conditions to be reversed, and the race-horse set to compete with the Arab for some twenty or thirty miles without a check over hard, dry, hot, sandy ground, and under a burning sun, the result would be entirely in favour of the native horse.

But we in this country seldom have the opportunity of seeing the Arab mare, she being considered far superior to the horse when in her best form. The owner of such an animal can scarcely be induced to part with her, especially if he should learn that she would be removed from the country. Moreover, except in the great breeding establishments which will presently be mentioned, almost every mare has

a number of owners—one, for example, owning her left foreleg, and three others possessing the remaining limbs. Another will own the tail, two others the ears, and so forth. Moreover, her prospective offspring are mortgaged in similar fashion; and, unless the joint proprietors are all agreed, the mare will not be allowed to change owners.



ARAB HORSES.

As to the great stud-farms, although some ten thousand pounds' worth of young foals are sold annually, the proprietor knows his business too well to part with the 'goose which lays the golden eggs' by selling at any price the dams which bring such profits. As to the sires, he is not so particular about them; so that a thoroughbred horse may be pur-

chased at a high price, while no sum will buy a mare of correspondingly pure breed.

The first European who was permitted to see the leading stud-farm of the day was Mr. Palgrave, whose vivid and picturesque descriptions of Feysul ibn Saoud's stables at Riad are familiar to lovers of horse literature. I, therefore, shall not quote them, but shall give a few extracts from Lady Anne Blunt's 'Pilgrimage to Nejd.' She made the pilgrimage in 1879, and was permitted to see the celebrated stud of Mohammed (Hamud) ibn Rashid at Haïl, which has long superseded that of Feysul ibn Saoud.

'Of anything like racing, we could learn nothing. Trials of speed are no longer in fashion, as they must have been once, and skill in turning and doubling is alone of any value. That some tradition of training still exists among the Arabs, the following recipe for rearing a colt seems to prove. It probably represents a traditional practice of Arabs as old as the days of Mahomet.

'During the first month of his life, let him be content with his mother's milk; it will be sufficient for him. Then, during five months, add to this natural supply goat's milk as much as he will drink. For six months more, give him the milk of camels; and besides, a measure of wheat steeped in water for a quarter of an hour, and served in a nosebag.

'At a year old, the colt will have done with milk;

he must be fed on wheat and grass—the wheat dry from a nosebag ; the grass green.

‘ At two years old he must work, or he will be worthless. Feed him now, like a full-grown horse, on barley ; but let him in summer also have gruel daily at mid-day. Make the gruel thus : Take a double-handful of flour, and mix it well in your hands with water till the water seems like milk ; then strain it, leaving the dregs of the flour, and give the liquid to the colt to drink.

‘ Be careful from the hour he is born to let him stand in the sun—shade hurts horses ; but let him have water in plenty when the day is hot.

‘ The colt must now be mounted, and taken by his owner everywhere with him, so that he shall see everything, and learn courage. He must be kept constantly in exercise, and never remain long at the manger. He should be taken on a journey, for work will fortify his limbs.

‘ At three years old he should be trained to gallop. Then, if he be of true blood, he will not be left behind. Yalla !

The same traveller, when she had the opportunity of inspecting Emir Mohammed ibn Rashid’s stud at Hail, acknowledged to be the finest Arab stud in the world, learned the points of an Arab mare :

‘ First of all, the head should be large. A little head the Arabs dislike ; but the size should be all in

the upper regions of the skull. There should be a great distance from the ears to the eyes, and a great distance from one eye to the other, though not from ear to ear.

‘The forehead, however, and the whole region between and just below the eyes, should be convex, the eyes themselves standing rather *à fleur de tête*. But there should be nothing fleshy about their prominence, and each bone should be sharply edged—a flat forehead is disliked. The space round the eyes should be free of all hair, so as to show the black skin underneath, and this just round the eyes should be especially black and lustrous.

‘The cheek-bone should be deep and lean, and the jaw-bone clearly marked. Then the face should narrow suddenly, and run down almost to a point; not, however, to such a point as one sees in the English race-horses, whose profile seems to terminate with the nostril, but to the tip of the lip. The nostril, when in repose, should lie flat with the face, appearing as little more than a slit, and pinched and puckered up; as also should the mouth, which should have the under-lip longer than the upper—“like the camel’s,” as the Arabs say. The ears, especially in the mare, should be long, but finely and delicately cut, like the ears of a gazelle.

‘It must be remarked that the head and the tail are the two points especially considered by the Arabs in judging of a horse, as in them they think they can discover the surest signs of breeding. The

tails of the Nejd horses are as peculiar as their heads, and are as essential to their beauty. However other points might differ, every horse at Haïl had its tail set on in the same fashion—in repose something like the tail of a rocking-horse, and not, as has been described, “ thrown out in a perfect arch.” In motion, the tail was held high in the air, and looked as if it could not, under any circumstances, be carried low.

‘With regard to colour, of the hundred animals in the Haïl stables there were about forty grays, or rather whites, thirty bays, twenty chestnuts, and the rest brown. We did not see a single black ; and, of course, there are no roans, or piebalds, or duns, for these are not Arab colours. Nearly all Arabs prefer bay with black points, though pure white, with a very black skin and hoofs, is also liked. But, as a rule, colour is not much regarded at Haïl ; for there, as elsewhere in Arabia, a fashionable strain is all in all.’

The Emir sends annually a hundred yearlings to Bombay, where they fetch a hundred pounds each. It is no wonder that he is not only ‘the most powerful of Bedouin sheyks, but the richest prince in Arabia.’ He has emissaries always looking out for the best mares ; and, what is wonderful in an Arab chief, he does not take them by force, but honourably pays for them. I have already mentioned that an Arab cares comparatively nothing for a horse, but seems almost to adore a thoroughbred

mare ; so that it is next to impossible for a European to obtain one. Lady Anne, however, did possess one of these animals, which she named 'Ariel,' and which was disabled, if not killed, by the charge of a wild boar. As Lady Anne writes :

'We could not stop the flow of blood, and no words can describe our misery as we watched it pouring on the ground. We were in despair ; for beside the fact of her being precious in race, we are much attached to the mare for her own sake, as who would not be ?—for Ariel is the noblest, and best, and gentlest creature that ever was.'

A portrait of her, as well as of Ibn Rashid's favourite dark bay mare, shows the peculiar carriage of the tail ; while the portrait of another mare, 'Canora,' shows admirably the points of the head.

Keeping in mind the three chief characteristics of the Arab horse—namely, the slender limbs, the wide-browed, pointed head, and the peculiarly arched carriage of the tail—we shall find no difficulty in identifying the chariot-horse of the ancient Egyptians with the Arab horse of the present day, whose pedigree is almost as ancient as that of his master.

Take, for example, any of the monuments on which the Pharaoh of the day is represented as

putting his enemies to flight ; and, in spite of the trappings with which the animals are covered, the Arab breed of the horses is at once discernible.

These peculiarities are even more strongly marked in a figure of an Egyptian horseman. Here, the artist has not been bound by the conventionalities which hampered the delineators of royal persons and deeds ; and, in consequence, the action of the horse and the attitude of the rider are represented with a freedom which is quite refreshing after the wearisome stiffness of all royal personages and their accompaniments.

The rider is shown as being independent of a saddle, not even a cloth being bound upon the animal. Had the saddle been in use, it would most certainly have been represented, so careful were these ancient artists about details.

This uncompromising adherence to detail is amusingly shown in some of the Nineveh sculptures, where a few horsemen are represented as body-guards to the king. The horses are saddled ; and the sculptor has been so anxious to bring the saddle into due prominence, that he has put the man entirely on the opposite side of the horse, thus enabling himself to work out in full the details of the saddle and its cloth.

The effect is, to our eyes, sufficiently ludicrous, especially as the sculptor has thought it necessary to represent both feet in full, and has placed them exactly in a line.

In all the figures of horses which are delineated by Assyrian artists, we see that when horses are used for purposes of state, even in the hunting-field, the natural length of their tails is augmented by ornamental tassels quite as long as the tails themselves. It is very clear that the Assyrians did not consider that amputation of several vertebræ of the horse's tail was 'conducive to human safety.'

That the peculiar appendage was wholly artificial, and was removed when the horse was released from labour, is shown by a singularly interesting sculpture representing the royal stables. The building, which is drawn with a delightful absence of perspective, was evidently of a very handsome character, the pillars at either side of the doorway being surmounted with a most spirited representation of the mountain goat, while the sacred 'pine' guards the opposite side of the building.

In the stable are four horses, whose attitudes are depicted with astonishing freedom and fidelity. Two are feeding from a manger, another is turning its head to gaze at some object behind it, and a fourth is being curried by a groom. The attitude of this horse, and the action of the groom, are so true to nature, that they would serve as a representation of any stable-yard in England. None of the horses wear the tail-tassels, which have evidently been removed together with the rest of the harness.

All the Assyrian horses, but especially those which

have just been described, exhibit the three marks of true Arab blood.

Both in Egypt and Assyria, the mode of harnessing the horses to the chariot was the same. Three horses were placed abreast, one being yoked on either side of the pole, and the third being on the left. As the driver always occupied the left of the chariot, the warrior being on the right, the former was in full command of all three horses, while the latter had his right arm at liberty to use his weapons.

This is shown by a very good figure of an empty chariot. In it are depicted the six-spoked wheels, which were evidently cast in bronze—indeed, as we find in several passages of the Old Testament, the entire chariot was often made of metal. There is the net-work floor on which the occupants stood, and the long central pole, terminated by a double yoke, each carrying a collar.

That the horse should be attached to the chariot in war we can easily understand ; but, according to our ideas, a chariot would be very much in the way when we wished to hunt. The Assyrian monarchs, however, appeared to have hunted the lion and the wild bull in no other way. They were attended by armed horsemen and footmen ; but they themselves occupied their chariots, using the bow, the javelin, and the dagger, the last-mentioned weapon being used in killing the bull by striking the blade into the junction between the skull and the first vertebræ of

the neck, thus severing the spinal cord, and killing the bull instantaneously—‘pithing’ it, as we now say.

Passing to very modern times, I must draw attention to the remarkable manner in which the various tribes of American Indians—themselves fast verging on extinction—have assumed their dominion over the horse.

The animal is not indigenous to the country, and could not be attainable until the white men had taken full possession of the red men’s country, and had made some progress in the work of expulsion which can only end in total extermination. Yet the aborigines seized upon the horse, and at last have become almost dependent on it for existence.

Many years have elapsed since they could make war or hunt without any assistance but their own limbs and the weapons of their own manufacture. The horse is now everything to them ; and it must be granted that their capabilities as riders are really wonderful. They can be independent of saddle, stirrup, or even of bit, clinging to the bare back of the horse as if they were part of the animal, and guiding their steeds by a mere loop of raw hide round the lower jaw. They certainly do avail themselves of saddle, stirrups, and bit when such appliances can be obtained ; but they can dispense with them, and use the horse under conditions which would render a European horseman helpless.

The exhibition of American-Indian life under the guidance of 'Buffalo Bill' was deeply interesting to those who looked upon it not as a mere show intended for passing amusement, but as a valuable lesson in anthropology, and a most instructive example of the dominion of man.

By what means was the horse first brought into subjection? Judging by analogy, we may safely infer that the means which were employed in prehistoric times were very similar to those which are still in use among semi-savages, such as the equestrian tribes of North-American Indians. I need not say that these men infinitely prefer to steal ready-broken horses from the whites, or from tribes with which they have a feud. But, failing these resources, they are obliged to catch horses for themselves, a task which demands no small exercise of skill and daring.

By the exercise of their hunter's craft they contrive to come within a short distance of a herd of wild horses, and, selecting the animal which most takes their fancy, fling the noose of a lasso round its neck. The captive's fate is then sealed, and it never will rejoin its comrades. For a time it struggles with its captor, but is soon weakened by want of breath, and at last falls senseless on the ground.

As soon as this object is achieved the hunter makes his way to the fallen animal, just allowing it

enough breath to sustain life, but not to regain strength. He then rapidly fastens its fore-feet together with 'hobbles,' so made that they can be cast loose in a moment, blinds it, and places a noose on its lower jaw, at the same time breathing strongly into its nostrils. He next allows it to rise, and, as it does so, again breathes into its nostrils, leaping immediately on its back.

For a time he allows the hobbles to remain, so that the horse may the sooner exhaust itself in its struggles to throw its rider. When he feels it to be thoroughly subdued he casts off the hobbles, and thus within an hour the active hunter has brought the horse under the dominion of man.

As for unseating the rider, such a feat is impossible. 'Buck-jumping,' which is always tried by a wild horse, is absolutely useless, and so is kicking, complicated with attempts to bite the rider's feet. Rearing is equally ineffectual, and, even when the animal overbalances itself and falls on its back, the rider quietly dismounts and springs on its back anew just as it is rising from the ground.

The horsemanship of these Indians is wonderful, and not the least astonishing of their equestrian feats is their trick, if it may be so called, of suddenly disappearing when at full gallop. The device, which is a singularly ingenious one, is as follows :

A slight but very strong cord of raw hide is plaited into the mane of the horse, brought under its neck, and the other end plaited into the mane on

the opposite side, so as to form a rather loose loop. When the rider wishes to cover himself from the enemy, he suddenly drops off the back of the horse, his elbow falling into the loop, and sustaining the weight of the body, and the heel of the opposite foot lying on the horse's back, as a fulcrum by which he can draw himself again into an upright position. Nothing can be seen of him except the sole of the foot, and that is practically invisible at a little distance.

Indeed, the Comanche Indians, who almost live on horseback, have often employed this device in surprising enemies who were not acquainted with their tactics. Leaving their lances in charge of the rear-guard, just before coming in sight of the enemy, they slung themselves at the side of their horses, and then boldly approached the foe, managing their horses so as to make them look like a troop of wild mustangs. This is done with such skill that there is nothing to arouse suspicion except the fact that the horses always keep the same side towards the enemy. When they have approached as closely as is safe, they gallop forwards at full speed, and before the entrapped adversaries have recovered from their surprise, showers of arrows have dealt destruction on all sides.

For the Comanche can use his short, but wonderfully powerful bow even when he is slung to his horse in this singular attitude. In his bow hand he grasps six or seven arrows, and can deliver them in

a constant stream. Meanwhile the rear-guard, who have been left in charge of the spears, hurry to their comrades, and deliver to each warrior his own weapon. A full account of this mode of fighting is given in Catlin's unique work.

When there is no need for disguise, but only for shelter from the enemy's weapons, the Comanche allows his lance to drop into the elbow-joint of the arm which supports the body, in which position it can be carried without interference with the bow and arrow, the round shield which is slung on the back guarding the body in case an enemy should contrive to slip round the protecting cover of the horse. These men almost live on horseback, and will hardly condescend to walk twenty yards. On foot they are ungainly in their movements, and, as Catlin writes, 'a Comanche on his feet is out of his element, and almost as awkward as a monkey on the ground without a limb or branch of a tree to cling to. But the moment he lays his hand upon a horse his face becomes handsome, and he gracefully flies away like a different being.'

The Araucanians are little inferior to the Comanches in their mastery over the horse and their dislike to walking. Indeed, as their heels are always encumbered with the huge spurs which form an integral part of Araucanian costume, walking is a very awkward proceeding, the toes having to be lifted upwards at every step, so as to raise the rowels of the spur from the ground.

CHAPTER XII.

EDUCATION OF THE HORSE.

Kalmuck horsemen—A Russian traveller's account—Riding an untamed horse without saddle or bridle—A furious horse and cool rider—A brave boy—Female riders—Semi-wild horses of the Balkans—Mr. Barkley's account of them—Their only use—Management of a herd—Reasons for non-improvement of the breed—Why every horse must be separately conquered—Imperfect reasoning powers of the horse—Its inability to distinguish between cause and effect—Modern horse-breaking—A change for the better—Rarey's system—Curiosity of the horse—Education of the animal—Teaching it confidence—Mares' milk and koumiss—Horseflesh as food.

RETURNING to the Old World, among the Kalmucks the subjugation of the horse is wonderfully carried out, as is shown in a vivid narrative by a Russian traveller, Hommaire de Hell.

‘ When we came out from the kibitka (Kalmuck house) the princess's brother-in-law took us to a herd of wild horses, where one of the most extraordinary scenes awaited us.

‘ The moment we were perceived, five or six mounted men, armed with long lassos, rushed into the middle of the herd, keeping their eyes constantly

fixed on the prince, who was to point out the animal they should seize.

‘ The signal being given, they instantly galloped forward, and noosed a young horse with a long, dishevelled mane, whose dilated eyes and smoking nostrils betokened inexpressible terror. A lightly clad Kalmuck, who followed them on foot, immediately sprang upon the stallion, cut the thongs that were throttling him, and engaged with him in an incredible contest of daring and agility.

‘ It would be impossible, I think, for any spectacle to more vividly affect the mind than that which now met our eyes. Sometimes the horse and his rider rolled together on the grass, sometimes they shot through the air with the speed of an arrow, and then stopped abruptly, as if a wall had all at once risen before them. On a sudden the furious animal would crawl on its belly, or rear in such a manner that made us shriek with terror ; then, plunging forward again in his mad gallop, he would dash through the herd, and endeavour in every possible way to shake off his novel burden.

‘ But this exercise, violent and dangerous as it appeared to us, seemed but sport to the Kalmuck, whose body followed all the movements of the animal with so much suppleness that one would have fancied that the same thought possessed both bodies. The sweat poured in foaming streams from the stallion’s flanks, as he trembled in every limb. As for the rider, his coolness would have put to shame the

most accomplished horsemen in Europe. In the most critical moments he still found himself at liberty to wave his arms in token of triumph, and, in spite of the indomitable humour of his steed, he had sufficient command over it to keep it almost always within the circle of our vision.

‘At a signal from the prince two horsemen, who had kept as close as possible to the daring centaur, seized him with amazing swiftness, and galloped away with him. The horse, for a moment stupefied, soon made off at full speed, and was lost in the midst of the herd. These performances were repeated several times, without a single rider suffering himself to be thrown.

‘But what was our amazement when we saw a boy of ten years old come forward to undertake the same exploit. They selected for him a young white stallion of great size, whose fiery bounds and desperate efforts to break his bonds indicated a most violent temper.

‘I will not attempt to depict our intense emotions during this new conflict. This child, who, like the other riders, had nothing but the horse’s mane to cling to, afforded an example of the power of reason over instinct and brute force. For some minutes he retained his difficult position with heroic intrepidity. At last, to our great relief, a horseman rode up to him, caught him in his outstretched arms, and threw him on the croup behind him.

‘The Kalmucks, as the reader will perceive, are

excellent horsemen, and are accustomed from childhood to subdue the wildest horses. The exercise we had witnessed is one of their greatest amusements. It is often practised by the women, and we have frequently seen them vying with each other in feats of equestrian daring.'

A strange contrast to these fiery animals is afforded by the wild horses of the Balkans, which, according to Mr. H. C. Barkley, 'are the most underbred, misshapen, runty little beasts in Europe. During all the years I was in Bulgaria I never saw one fit to put in a tinker's cart, and I do not know what the brutes are reared for, unless it is to tread out the corn, for that is the only work I have ever seen them doing, and I never heard of anyone buying a really useful pony from these droves.'

' However, they are little trouble, for winter and summer they feed themselves on the open plains, and there increase and multiply. They go about in droves of about thirty, with one stallion who acts as master over them all, and keeps them in order. Woe betide a young lady that casts sheep's-eyes towards a neighbouring drove, or a colt who wishes to enlarge his mind by an interchange of ideas with the young bloods of another family. The vicious old husband and father trots quietly up to the delinquent, and either takes at one bite about a pound of solid flesh out of its neck, or gives it a kick on the hocks which reduces it to three legs for a week.'

‘I have often asked the farmers and villagers why they do not cross them with the Arab, and take a little trouble to improve the breed ; but have always received the same answer, “What would be the use of it ? If they were good for anything, the Government would take them for the troops, or the Government officials and police would walk off with them for their private use ;” and I believe that they are right.

‘These droves of horses are allowed to take care of themselves, as they are not worth the cost of a man to guard them, and besides, no one would care to steal them.’—*Five Years in Bulgaria.*

Seeing that the horse has been the servant of man for countless centuries, the word ‘conquest’ may seem rather a strange one. Yet it is true ; for, unlike the dog, every horse has to be conquered before it can be brought wholly under the dominion of man.

This result can be attained in more than one way ; but, whatever may be the means, the primary object is to make the horse believe that man is stronger than itself. The simplest mode of gaining this end is by the processes which have just been mentioned.

The horse feels that a single man can arrest it while at liberty among its comrades, and choke the breath out of its body by some irresistible power. He can deprive it of sight in an equally mysterious manner,

can tie its feet together, throw it down when he likes, mount its back and cling there as if he were part of itself, and, moreover, can force it to go in any direction which he chooses. It feels that whenever it tries to oppose his will, it suffers pangs of intense bodily pain. It realizes that at all points man is a master whom it is useless to resist, and thenceforth makes abject and total surrender of its will.

Though our modern horse-breakers do not employ the mercilessly cruel process adopted by the North-American Indian, the Gaucho, and other equestrian nations, they seldom can bring a horse completely under control without inflicting much pain upon it.

Not many years ago, the process was far more severe, the animal being simply flogged into submission. Even the 'trick' horses of a circus were taught to perform their tasks through fear, a failure being always followed by a flogging for which the proprietor would nowadays be prosecuted. At the present time these horses are taught by gentle patience, accentuated by rewards when the task is properly performed.

Even the Rarey system, by which the infliction of pain is absolutely prohibited, is, in reality, as complete a conquest of the horse as the more cruel modes of taming, and only differs from them in the avoidance of pain. Having held many conversations with the late Mr. Rarey, and seen him operate on a variety of 'irreclaimable savages,' I will give a brief outline of the plan which he adopted.

It is based on three principles. First comes a thorough knowledge of the horse, enabling the trainer to foresee exactly the range of a savage horse's hoofs or teeth, and to anticipate what he is going to do with either of these weapons. Next, he must know how to trade on the curiosity of the horse, an animal which is as inquisitive as a cat, equally restless and suspicious until it has thoroughly examined the strange object, and equally indifferent to it after its curiosity is satisfied. Lastly comes the peculiar nature of the horse, which causes it, when thoroughly vanquished, to yield itself wholly to the will of its conqueror.

Without either whip or stick, Rarey would enter the arena—a circus being generally used, because the ground can be thickly covered with sawdust—and there await the horse. His whole armoury consisted of two strong and pliant leathern straps—one short, and the other a long one. The former had a buckle at one end, and the latter a flattened ring, through which the strap was passed so as to form a noose. Both the straps were rolled up tightly, and kept in their respective pockets until wanted.

The horse was then allowed to enter the arena, and left at liberty, Rarey remaining as motionless as if he had been a statue. Mostly, the horse was quite bewildered by such conduct. All human beings with whom he had come in contact either ran away from him or inflicted pain on him, whereas this

strange object, which looked like a man, did neither. It must be examined and scrutinized. So the horse would walk round and round him several times (Rarey always keeping his face towards it), and then would creep slowly towards him with outstretched neck as if attracted by some invisible magnetism.

Now and then I have seen a horse fly at him at once with open mouth, more like a tiger than a horse—snap at him, wheel round, and lash at him with its hoofs ; but all ineffectually, Rarey having just stepped out of reach, and then resumed his motionless attitude. After one or two unavailing attacks, the horse stopped, and began to contemplate the strange being which could not be bitten or kicked, and would not run away. Then curiosity prevailed, and it went up to him as already described. By degrees, Rarey got to the off-shoulder of the horse, and laid his hand very softly on it. Sometimes the animal sprang away, and in that case he made no effort to check it, but waited for it to return, as he knew it would do.

By degrees, he made the horse understand that a human hand did not hurt it. At last he was able, with the left hand, to hold the bridle close to the jaw, and with the right hand to stroke the near fore-leg downwards, and grasp it gently at the pastern. Then he put his right shoulder against the animal's side, and began to push gently against it, so as to give a sort of rocking motion to the animal. As he

thus threw the weight on the right feet, he gently lifted up the left foot, and put it down again, repeating the process until he was allowed to double the hoof against the limb. He then slipped his hand into his pocket, brought out the short strap, passed it round the hoof, and buckled it firmly, thus leaving the horse standing on three legs, and shorn of half its weapons, a horse being unable to run or kick unless it has the use of both its fore-legs.

Sometimes the animal tried to release its foot before the strap was adjusted. When this happened, Rarey never resisted, but released the foot, and presently took it up again, and fastened the strap. Then a similar process of stroking, or 'gentling,' took place with the right foot, until the noose of the long strap was adjusted round the pastern, the strap itself passing over the horse's back, and firmly grasped in Rarey's right hand, while his left held the bridle close to the snaffle, the only form of bit which Rarey would use.

The horse was then slightly pulled towards the left, thus being thrown off his balance, and forced to take a step forwards. The moment that the hoof was off the ground, the strap was forcibly pulled, so as to bring the horse on its knees. In a moment it was up again upon its hind legs, fighting with all its power with its bent knees. This was the most trying part of the process, as the animal must be guided by the left hand, while the other hand is engaged in preventing the right leg from being extended.

Sooner or later, down comes the horse again on its knees ; and, after a succession of similar struggles, is so exhausted, that it is only too glad to allow itself to be pushed on its side, and lie on the ground panting and terrified. As soon as it rolls over, the right foot is strapped up like the left, so that the operator has both hands at liberty. Again and again it is encouraged to fight, until at last it acknowledges itself as hopelessly beaten, and abandons all farther resistance. In fact, it cannot discriminate between the straps and the hands of the operator, and thinks that man is much stronger than itself. For this reason Rarey never resisted a horse when it tried to escape from him, as, if he had done so, the horse would have found that it was the stronger of the two.

Neither did he move hurriedly, and still less did he bawl at the horse, as ignorant men invariably do. All his actions were quiet and deliberate, and he mostly worked in silence, only now and then speaking to the animal in a gentle and kindly tone. At last he used to remove all the straps, lie down by the side of the horse, put his hand into its mouth, lay its hind hoofs on his head, and treat it as if it were a favourite dog.

Then came the process of educating it not to take fright at strange sights and sounds. For example; he would take a drum, and hold it in front of the horse. Urged by curiosity, the animal would stretch out its neck, and begin to sniff at the strange object.

When it had familiarised itself with the drum, Rarey would give a gentle tap on it with one finger. Back started the horse; but as the drum was held perfectly still, it soon found that there was no cause for alarm, and renewed its examination. Louder and louder taps were then given, and at last a deafening roll was beaten without exciting the least alarm. In similar fashion the horse was taught to allow an umbrella to be suddenly opened in its face, and to permit all the six barrels of a revolver to be fired on either side of its head without even shrinking from the sights and sounds, which would drive most horses frantic with terror.

Here, then, we have the horse most effectually conquered by the superior reasoning powers of man. Even after the useless struggles which it has made, the horse is still infinitely the more powerful animal of the two. But the creature does not know it, and therefore succumbs to the dominion of man. This part of the subject is very interesting, and can be enlarged to almost any extent.

We should scarcely expect to find the horse among the animals that support their owners by their milk. Yet the Tartars, who, as we have seen, are mighty horsemen, make the milk of the mare one of their chief articles of diet. It is not drunk in a fresh state, but is allowed to become sour, and then stirred continually until it becomes a sort of milk-pudding, having a peculiar acid flavour. The milk is also fermented, and a sort of spirit called

‘koumiss’ made from it. Some years ago, koumiss became quite fashionable as a diet for invalids ; but it seems to have dropped out of fashion as rapidly as it sprang into favour.

The flesh of the horse is also eaten by the Tartars, who kill for this purpose all the weakly-looking foals as soon as they are born, allowing none but the strong and healthy to live.

CHAPTER XIII.

THE CONQUEST OF THE ASS.

Origin of the domestic ass—Difficulty of subduing it—Narrow escape of Rarey—Intellectual powers of the ass superior to those of the horse—Wild asses of Asia and Africa—The wild ass of the Scriptures—Half-wild asses of Quito—The domestic ass—Topsel's story of the 'cunning player' and the ass—Circus jokes—Jack and his master—Various breeds of asses—Maltese Jack—Value of the ass in the East—Pack-asses—The ass of ancient Egypt—Riding on asses—A great lady's donkey and its equipments—Many-coloured donkeys—'Saddle me the ass'—Construction of the saddle—Endurance of the ass—Asses'-milk and ass-flesh.

SCARCELY less important to man than the conquest of the horse is that of the ass—a conquest so old, that it is lost in the mists of antiquity.

As to the origin of the domestic ass, there is little, if any, doubt that it can be traced to the wild ass of Northern Africa, sometimes called the 'onager.' I am inclined to think that the task of bringing the ass under the dominion of man was much more difficult than the conquest of the horse.

Strange as such a statement may appear to many persons who have always been accustomed to consider the words 'ass' and 'donkey' as synonyms for

stupidity, the ass is a far more intellectual animal than the horse. To outwit a horse is comparatively an easy task ; but to outwit an old and experienced donkey is nearly as difficult as to deceive an old rat. It is well known that if a number of horses and an ass be in a field, and the whole of the animals escape, the ass is the clever delinquent who has discovered the secret of the fastening, and led its companions into temporary freedom. Only lately I heard of an ass which was in the habit of opening the latch of a stable-door. The animal knew that the horse would at once walk out, and it then entered the stable, and helped itself to the horse's provender. Moreover, the ass can kick even when one leg is tied up ; so that even had a precursor of Rarey existed in prehistoric times, he would have been deprived of one of his chief agents in subjugating the animal. This capability once nearly cost Rarey his life. He was trying to tame a zebra—which is only a kind of wild ass—and having strapped up one of its fore-legs, thought himself safe from its heels. He was more than astonished when the animal's hoofs passed so close to his head that another inch or two would probably have caused his death, and would certainly have enabled the fierce little animal to inflict a dangerous wound.

Then the wild ass is in its own country proverbial for speed and wariness, so that even its capture is a most difficult task. Many passages of the Old Testament refer to the swiftness and indomitable

character of this animal. For example, in Job xxxix. 5-8, the following graphic description is given :

‘Who hath sent out the wild ass free, or who hath loosed the bands of the wild ass ?

‘Whose house I have made the wilderness, and the barren land his dwellings.

‘He scorneth the multitude of the city, neither regardeth he the crying of the driver.

‘The range of the mountains is his pasture, and he searcheth after every green thing.’

The prophet Jeremiah more than once alludes to the special characteristics of this animal :

‘Thou art a wild ass used to the wilderness, and that snuffeth up the wind at her pleasure ; in her occasion who can turn her away?’ (Job ii. 28).

Also in chapter xiv. 5, 6 :

‘And the wild asses did stand in the high places, they snuffed up the wind like dragons, their eyes did fail because there was no grass.’

Canon Tristram mentions that he has ‘seen this ass wild in the deserts of North Africa in small troops of four or five. When riding in the Sahara, we detected what we took to be antelopes on a slightly elevated mound of sand ; then by our glasses discovering that they had no horns, we suspected that they were the horses of Bedouins, who might be concealed behind them, until they allowed us to approach near enough to make them out more clearly, when, snuffing up the wind, they dashed off

at a speed which the best of our horses could not have approached.'

The same writer mentions that he saw in the oasis of Souf a wild ass which had been snared when a colt.

'But, though it had been kept for three years in confinement, it was as untractable as when first caught, biting and kicking furiously at everyone who approached it, and never enduring a saddle on its back. In appearance and colour it could not have been distinguished from one of the finest specimens of the tame ass. The Syrian wild ass in no way differs from the African in habits.'

It is therefore justifiable to assume that the conquest of such an animal must have been a far more difficult task than gaining the mastery over the horse.

Following the example of the horse, there are in Quito many herds of semi-wild asses, which, like the mustangs, are nominally private property, but can be captured by anyone who pays the owner a small fee, and chooses to take the trouble of catching them. This is by no means an easy task, as the asses are not only exceedingly swift and wary, but are as sure of foot as the wild goats, and, when they are pursued, take to rocky ground where no horse, when encumbered with a rider, can follow them. They are extremely jealous of the horse, and if a horse should be unlucky enough to trespass into their grazing grounds, he would soon be bitten and kicked to death.

There is one remarkable difference between them and the true wild ass. The latter, as we have seen, is scarcely to be tamed, even after it has been captured and has passed several years in durance. But, when once a load has been placed upon a Quito ass, all its wild spirit dies out of the animal, which ever afterwards is not to be distinguished from the ordinary domesticated ass from which it is descended.

As to the intellect of the ass, so many anecdotes have been told that I will only give two instances, one which was narrated several centuries ago, and one which occurred within the last few months. The first of these narratives is extracted from the delightfully quaint work of Topsell, in which the unicorn, mermaid, cockatrice, and other fabulous animals are described in full faith of their living reality.

‘There was a cunning player in Africa, in a city called Alcair, who taught an asse divers strange tricks or feats, for in a publick spectacle, turning to his asse (being on a scaffold to show sport), said, “The great Sultan proposeth to build him an house, and shall need all the asses of Alcair to fetch and carry wood, stones, lime, and other necessaries for that business.” Presently the asse falleth down, turneth up his heels into the air, groaneth, and shutteth his eyes fast as if he had been dead ; while he lay thus, the player desired the beholders to con-

sider his estate, for his asse was dead. He was a poor man, and therefore moved them to give him money to buy another asse.

“ In the meantime, having gotten as much money as he could, he told the people he was not dead, but, knowing his master’s poverty, counterfeited in that manner, whereby he might get money to buy him provender ; and, therefore, he turned again to his asse, and bid him arise, but he stirred not at all. Then did he strike and beat him sore (as it seemed) to make him arise, but all in vain—the asse laid still.

‘ Then said the player again, “ Our Sultan hath commanded that to-morrow there be a great triumph without the city, and that all the noble women shall ride thither upon the fairest asses, and this night they must be fed with oates, and have the best water of Nilus to drink.” At the hearing whereof up started the asse, snorting and leaping for joy. Then said the player, “ The Governor of this town hath desired me to lend him this my asse for his old deformed wife to ride upon,” at which words the asse hangeth down his ears, and understanding, like a reasonable creature, began to halt as if his legs had been out of joint. “ Why, but,” said the player, “ had thou lifer carry a fair young woman?” The asse wagged his head in token of consent to that bargain. “ Go then,” said the player, “ and among all those fair women chuse one that thou mayest carry.” Then the asse looked round about the

assembly, and at last went to a sober woman and touched her with his nose, whereat the residue wondered and laughed.'

There is nothing new under the sun. When I was a boy at school I witnessed at a fair an exact counterpart of this performance, the only difference being that modern local dignitaries were substituted for the Sultan and Governor, and that when the owner of the 'learned donkey' told the animal to find out the greatest scoundrel in the company, the ass trotted up to himself, and declined to point to anyone else.

Circus jokes are so perennial that I have no doubt that the 'cunning player' of Alcair made 'the residue wonder and laugh' with the same joke directed against himself, and that he, too, had inherited it from a long line of predecessors.

Now we will take an altogether modern story.

'A donkey called Jack was employed in farm-work which only required him on certain days of the week, and for some time all went well. One morning, however, when the farmer went to Jack's stable to fetch him to work the animal was gone, and could not be found anywhere on the premises. All the farm-labourers denied having let Jack loose or even opened the stable-door. Next morning, however, he was found quite at his ease in the stable, having entered it as mysteriously as he had

left it. This unaccountable disappearance occurred several times, followed by the equally mysterious reappearance. As it always happened to be a working day when Jack was missing, his master had him carefully watched by two men.

‘While they kept a strict vigil, dreading almost



JACK'S DETECTION.

to wink for fear of losing sight of Jack, this clever rogue lay at ease on the straw. But, as soon as he heard a step approaching the stable, and the key turning in the lock, he ran and placed himself behind the door, raising himself on his hind legs and squeezing himself into the smallest possible

space, so as to conceal himself completely from sight.'

We of the North-Western world find it difficult to realize the inestimable value of the ass to the inhabitants of the East. With us, it is seldom used as a beast of burden for goods, and never for riding purposes except by children and men of the lower classes, into whose hands it has almost entirely fallen. Consequently the ass is, in this country, a small and comparatively stunted being compared with the high-bred asses of the East.

It seems a pity that more pains should not be taken to improve the breed both in size and strength. There would be but little difficulty in doing so, considering the fine proportions of the asses which are annually exhibited at our shows. For example, at the exhibition held at 'Olympia' on May 30, 1887, Malta Jack, a cross between the Maltese and Poitou breeds, measured fifteen hands and one inch in height—a fair height for an average hack.

In ancient Egypt the ass was largely used as a pack animal, as we see in many of the monumental paintings. The corn, for example, which was trodden out by oxen was brought to the threshing-floor in large baskets on the backs of asses.

In this country the sight of a gentleman riding a donkey would cause inextinguishable laughter ; but in the East no gentleman, unless he were acting in a military capacity, would dream of riding any other

animal. So there was no humility involved in the fact that our Lord rode upon an ass during His triumphal entrance into Jerusalem. He was there in the peaceful capacity of a rabbi, and therefore would naturally ride upon an ass.

In Miss A. B. Edwardes's work, to which frequent references have been made, a description is given of a lady of rank riding to the bazaar on her donkey. After describing the richness of the lady's apparel, the writer proceeds as follows :

'Nor is the steed less well dressed than the mistress. His close-shaven legs and hind-quarters are painted in blue and white zigzags, picked out with bands of pale yellow. His high-pommelled saddle is resplendent with velvet and embroidery, and his head-gear is all tags, tassels, and fringes. Such a donkey as this is worth from sixty to a hundred pounds sterling.'

Bayard Taylor also mentions the extraordinary fashion of shaving and painting the donkeys of the East :

'The first animal I rode had legs barred like a zebra's, and my friend's rejoiced in purple flanks and a yellow belly.'

Even with the donkeys which are kept for hire in the streets, the greatest pains are taken to make the saddle as showy as possible, this being again at

variance with our Western ideas. Scarlet is the favourite colour, and saddle, bit, and harness generally are covered with tufts of coloured cloth and bits of polished metal, which will flash brilliantly in the sunshine. Canon Tristram well points out that the importance of the saddle is indicated by the frequent references made to it in the Old Testament. He also describes the mode of manufacture :

‘The saddle of the ass, so often mentioned in Scripture, is a very elaborate structure, wholly different from that of the horse. Under it is spread a saddle-cloth of several folds of thick woollen. The saddle itself is of great thickness, made of straw stitched under carpet, and very flat at the top, with a high rounded pommel. Over it is spread a saddle-cloth of Persian carpet or velvet of the brightest colours, ornamented with a fringe hanging over the animal’s tail. The stirrups are small and narrow. The bridle is ornamented with embroidery, tassels, and cowries, and sometimes little bells are attached to the reins.’

Though the average ‘hack’ ass of the East is so small that, in spite of the high-cushioned saddle, the feet of an ordinary English traveller nearly touch the ground, it will carry a heavy rider for several hours, and, unlike the horse, is little affected in point of speed by hills or broken ground. In desert travel it almost equals the camel in point of endurance. In

the East, therefore, the conquest of the ass is even more important than that of the horse.

I need scarcely remind the reader that the milk of the ass is in great favour as a diet for invalids and delicate children, it being very light and digestible. The flesh is also of value as an article of diet, being used in the manufacture of certain Continental sausages. Young asses are used for this purpose, and specially bred for the butcher. To some persons this diet may seem rather revolting. But it must be remembered that the flesh of the wild ass is considered as the greatest dainty that an Eastern hunter can offer to his guests.

CHAPTER XIV.

THE CONQUEST OF THE OX.

The ox and civilization—Architecture and the ox—Various uses for the animal—The Kafirs of South Africa and their cows—A cow the unit of value—Upset price of a wife—Effect of beef on Kafirs—The Kafir and milk—‘Amasi’—Butter-making—Uses of the butter—Agriculture and the ox—The plough *versus* the hoe—Primitive plough—Reasons why the plough has not been improved in the East—‘Tickling the earth with a hoe’—Oriental government—‘Stalled,’ *i.e.* fatted, oxen—Number of oxen used for the plough—A mixed team—Treading out the corn—Construction and use of a threshing-floor—The ‘threshing instruments, and instruments of the oxen’—The ears and the stubble—Oxen as pack animals—Oxen for women’s carriages—The Ethiopian princess—Modern Indian ox-carriages—The ‘water buffalo’ of Bulgaria—The Turk and his water-buffaloes.

A DISTINCT epoch in civilization is marked by the conquest of the ox.

Possessing the dog, the camel, the horse, and the ass, man could lead a nomad life, having no fixed habitation, needing no dwelling except the tent (and therefore without knowledge even of the rudiments of architecture), and living wholly on the products of the chase, or the milk and coat of the animals with which he was associated. But when the ox was added to man’s possessions, the nomad existence

must needs give way to a comparatively fixed life, as the ox cannot be taken to any great distance from pasture and water. Agriculture naturally followed the purely pastoral life ; the substitution of permanent houses in lieu of tents produced architecture ; the agglomeration of houses, which at first were mere villages, developed into towns and cities ; social polity necessarily followed, and by these successive steps were nations formed.

At the present time we can survey, as if in a panorama, the connection of the ox with man, and the mutual influence which the two beings have exercised upon each other.

The paintings and sculptures of ancient Egypt and Assyria depict, in the most vivid manner, the relationship between man and oxen, so that we have before us the records of more than three thousand years ; those records, moreover, clearly pointing to a past of at least equal length.

Then the enormous development of travel at the present day enables us to see simultaneously almost every phase of man's relationship with this invaluable animal. It will of course be understood that I do not use the word 'ox' in its restricted sense, but employ it to signify any kind of domesticated oxen, of both sexes and all ages.

The different modes in which the ox is used by man are indicative of different stages of civilization. The first stage is when the animal is found to be too valuable to be merely killed and eaten, and is

employed for the sole purpose of obtaining a constant supply of its milk. This stage of civilization is still existent among the various South-African tribes, who go by the general name of 'Kafirs,' the Zulus being the most perfect examples of cattle-breeders for the sake of the milk. These cattle are very small compared with those of Europe, seldom exceeding two hundredweight, whereas our Hereford cattle weigh more than eight times as much.

It is very seldom that a Kafir can afford to kill a cow for food. Cattle form the sole wealth of a Kafir, and are to him what gold was to misers before the days of banks and investments. The Kafir youth cannot become a 'man' until he is married, and, as the upset price of a wife is eight cows, beside those which he will need to keep up his household, he has from earliest childhood been accustomed to consider the possession of cows as the one thing needful.

Moreover, even a man with only one wife enjoys but scanty consideration. Women are servants as well as wives; they hoe the field, cut and fetch the fuel, and do all the hard work, the man doing nothing except milking the cows and hunting. He requires at least four wives before he can attain the height of a Kafir's ambition, *i.e.*, lie in his hut all day and smoke his pipe, contemplate his cows in the cool of the day, and leave all the real work to his wives.

Only the wealthy, therefore, who have accumulated as many wives and cows as render their lazy life

secure, can afford to kill a cow as a feast for their friends, and they are so proud of their wealth and liberality that they fasten the skull of the cow on their huts, as an incontrovertible proof of dignity.

Except, therefore, at distant intervals a Kafir never has the chance of eating beef, and, indeed, is so little used to it, that when he does take part in a feast, and gorges himself, as is the custom with all uncivilized races, it has a sort of intoxicating effect on him. Milk, therefore, mixed with the flour of 'mealies' (*i.e.* maize, which has been acclimatized and thrives wonderfully in South Africa), forms the staple of a Kafir's diet. But he dislikes fresh milk, so that 'milk warm from the cow' would be no luxury to him. He always keeps the milk in vessels which have previously contained curdled milk, and will not consume it until it has all curdled. In this state it is called 'amasi,' and is made into a sort of porridge by being stirred up with maize flour.

The Kafir also consumes large quantities of milk in the manufacture of butter, by shaking the cream in a skin bag. Not that he eats the butter, thinking it far too valuable to be thus wasted. He wants it for the purpose of lubricating his body and especially his head, this custom being followed by many dark-skinned inhabitants of hot countries. No Abyssinian gentleman, for example, thinks his toilet completed until he has put a large lump of butter on the top of his head, so that when he goes out in the sunshine

the butter may melt and run down his body and clothes.

Here, then, we have at the present day the living representatives of the pre-historic people who had learned that the ox was too valuable to be killed and eaten, and that more nourishment could be obtained by breeding cows and using their milk as food, than by treating them like the deer, antelope, or other edible animal. Agriculture, except in the most primitive state, did not exist, no preparation of the ground being needed except a mere scratching of the surface with rude tools wielded by women's hands.

Another phase in the joint history of ox and man now presents itself. Not only must man be fed, but the ox must be fed also. For a time it would be sufficient to lead the ox from one pasture ground to another. But, as men and oxen increased in number, the natural pasture grounds were insufficient, and new feeding grounds had to be made. In other words, agriculture became a necessity of life, and a permanent supply of food for ox and man was gradually substituted for the precarious mode of subsistence which had hitherto supplied the needs of both.

Then began the true conquest of the earth. Fields were marked out, protected by fences or landmarks, and sown with various grains, wheat

being the most valuable. Moreover, it must be remembered that every cereal is only the development of a plant which, in former days, was nothing but a weed, just as the cabbages, carrots, turnips, celery, asparagus, and other vegetables of the present day were nothing but worthless weeds so lately as the reign of Henry VIII.

In order, therefore, to carry on this development, the earth required far more preparation than could be achieved by the hands of women aided by the rudest of tools. Such work was then taken away from the women and transferred to the ox, the plough being substituted for the hoe. True, the plough was of the very feeblest description, being nothing more than a conveniently shaped branch of some tree, the longest portion being used as the pole to which the oxen were harnessed, the next longest serving as the handle, and the shortest as the ploughshare.

Such was the plough even of ancient Egypt, and such is the plough of the modern Egyptian and Hindoo, the lapse of three thousand years having had scarcely the slightest effect on this very primitive implement. I have already mentioned that the lapse of centuries made no improvement in the chariot, which, instead of developing into a more comfortable and useful vehicle, has disappeared altogether.

We, in this country, where so much of its prosperity depends on successful agriculture, can hardly under-

stand this seeming apathy. This is even more the case in many districts of America, where cereals of various kinds, and especially wheat, are grown on a gigantic scale. Both here and in America the brains of inventors are racked to discover ploughs which will penetrate deeper than their predecessors, comminute the earth more finely, and require less power to draw them. In spite, however, of all improvements, even the best modern ploughs retain very much the shape of the original implement, even in the case of those which are propelled by steam.

Personally, I cannot but think that, in the matter of ploughing, we shall have to take a totally new departure, especially as we can now bring steam to our aid. No plough that is dragged through the ground can penetrate to any great depth, even the steam-plough being merely pulled through the ground, and not cutting deeper than the spade can do. Whereas we want a plough which will force its own way through the ground, can be set to any scale, from a yard to six inches, according to the depth of the arable soil, and will comminute the earth simultaneously with bringing it to the surface. In fact, as was pointed out many years ago by Mr. Wren-Hoskyns, the plough of the future will be a translation into metal of the mole, an animal whose services to agriculture are so little appreciated.

We, then, of this busy Western world, who are always craving after novelties and improvements, can scarcely understand how the inhabitants of

Northern Africa can go on century after century, and still employ the same primitive and inefficient implements which were used by their progenitors three thousand years ago.

But we must remember that the conditions are altogether different. We are of a different race, the climate is different, and so is the soil. Moreover, both in England and America a man may enjoy the fruit of his own labours, of which not even the Sovereign for the time being can deprive him.

See, for example, how much depends on the climate. There is heat enough and to spare, the chief difficulty being to ensure a supply of water. Hence the otherwise unintelligible passage, 'Blessed are ye that sow beside all waters' (Is. xxxii. 20). There is no need of manuring the ground, for the annual rise of the Nile covers the country on either side with a rich alluvium. For the same reason there is no need for the plough to penetrate deeply into the ground, and in many places, as was epigrammatically stated, 'if you tickle the earth with a hoe, she laughs with a harvest.'

In such a climate, therefore, the elaborate ploughs are not wanted which are needed for tearing to pieces our stubborn soils. Then, in hot climates, and among dark-skinned races, very little clothing is required, especially during work, and that of the very cheapest description. Food, again, is of the simplest character, and, as has already been mentioned of the Kafirs, is mostly of a vegetable nature, the

Egyptian peasant seldom even getting milk to mix with the modicum of coarse flour which is ground by the women before every meal.

There is, therefore, but little inducement for the Egyptian to desire any better aids to agriculture than were employed by his ancestors. But the chief blighting influence against progress is the abominable government of the Turk. No man dares to possess better clothing, a better house, or to cultivate his field better than his neighbours, because he knows that the Government officials will swoop down on him like so many vultures, as we have already seen in the case of Bulgarian horses, double his taxes, take his property, and subject him to torture, in order to extort from him the money which they assume that he has concealed.

The same hindrance to progress is to be found in India, Oriental rulers being very much alike, whether they be Mahometans or worshippers of Vishnu. Hence the exact similarity of the plough of modern Egypt and Hindostan, and the identity of both with the plough of Joseph's time.

A recent American traveller in Mexico expresses great indignation at the state of agriculture, and especially at the wooden plough, which seldom has even a strip of iron fastened upon it to serve as a share. But he has forgotten to take into account the character of the race which inhabits the district, the nature of the soil, and the influence of the climate.

In agriculture, then, the ox was almost wholly used for drawing the plough or carts, and for treading out the corn from the husks. Not that it was never used for food. On the contrary, it was, as with us, specially kept and fattened for that purpose.

Scriptural allusions to the 'stalled ox' and the 'fatted calf' are familiar to us from our childhood, and it is most interesting to see on the ancient Egyptian monuments many representations of fattening these oxen in their stalls. They were fastened to the stall and fed by hand, the herdsmen always sitting on their heels in front of their charges. In most of such representations there is some little touch which shows the intimate knowledge of the subject possessed by the artist. For example, in more than one such scene the oxen are standing in a row and being fed. One, however, has taken its fill, and is reclining at its ease, while chewing the cud. No food is ever represented as being offered to these recumbent animals.

The number of oxen used for the plough was exceedingly variable, sometimes a single animal sufficing, and sometimes four being harnessed to one plough. Mixed teams appear not to have been employed—certainly no such teams as are mentioned by a traveller on the Continent when the present century was young. The team in question consisted of a cow, a donkey, a pig, and a woman, and the narrator rather wickedly adds that of the four animals the pig was the most effective.

In one of these pictorial representations of Egyptian agriculture, the distinction between the ox and horse is almost ostentatiously shown. Two ox-teams are drawing the ploughs, while two men are sowing the seed 'broad-cast.' In the midst of the field stands the owner, leaning on his long staff (a mark of high rank in ancient Egypt) and supervising his labourers. On the outskirts of the field is his chariot, which is in waiting for him, and drawn by a pair of horses, which are held by his charioteer.

Another agricultural office which was performed by the oxen was treading out corn from the husks, the hoofs of the oxen performing the same task which the flail still fulfils in this country at the present day, though it is being superseded by the thrashing-machine as completely as it superseded the hoofs of the ox.

Nothing can be simpler than this process. A smooth, flat surface is prepared, mostly made of clay, carefully 'puddled' with water, beaten flat, and allowed to dry in the semi-tropical sunshine, which bakes it as hard as brick. Such was the 'threshing-floor of Araunah the Jebusite.'

Upon this floor the corn was spread, and oxen driven round and round it, while the labourers, with their wooden forks, or rakes, continually kept the corn under the hoofs of the animals. These rakes, forks, and ox-yokes and goads were 'the threshing implements and instruments of the oxen' which Araunah offered as wood for a burnt sacrifice. By

the beneficent law of Moses, the oxen which trod out the corn might not be muzzled, but were allowed to eat as much corn as they liked during their work. The Egyptians had no such law, and so we find by the monuments that the oxen were fastened together by fours, a wooden bar passing over their foreheads, and lashed to the horns. It would, therefore, be impossible for an ox to stoop its head to the ground without the co-operation of its three companions.

One very interesting picture represents the four oxen fastened together, and being driven by one man, while another, armed with a large three-pronged fork, is preceding them, and spreading the ears under the feet of the animals. Behind the driver is an ass, from whose back another labourer has taken two basketsful of ears of corn, which he is throwing into the threshing-floor. It must be mentioned, by the way, that the ancient Egyptians did not cut the stalks near the ground as we do, but severed them just below the ear, leaving the straw still standing. This custom explains the use of the baskets, which, if the reapers had cut the stalks as we do, would have been quite inadequate to the task, but which were capable of conveying a goodly supply of the ears—two, in fact, being a full load for a donkey.

Cutting the straw close to the ground was a separate operation. This was done in order to save the straw from being broken by the feet of the oxen. Straw was exceedingly valuable in those days, and

was especially useful in making bricks, being mixed with the clay just as our plasterers use hair. The bricks were not burned, but only baked in the sun, and, therefore, the straw was needed to give the required tenacity. Hence the cruelty of Pharaoh in making the Hebrews cut and fetch the straw for themselves, thus imposing on the brickmakers an additional task, which rightly belonged to the agricultural labourer.

Oxen were also used as pack-animals, illustrating a passage in *1 Chron. xii. 40*, narrating the events that occurred when David was consolidating his kingdom: 'They that were nigh them, even to Issachar and Zebulon and Naphtali, brought bread on asses, and on camels, and on mules, and on oxen.'

Until comparatively late years, the ox was employed in this country for draught purposes, including the plough, and, when I first visited America, I was quite startled by seeing oxen harnessed to ploughs and sleighs, my childhood seeming to have come back to me, and an old farm-yard near Oxford to rise again before my eyes. In many of the United States, ox-carts are still used for personal conveyance in places which are remote from cities.

Similar carriages were in use among the Egyptians and their neighbours, as is shown by the wonderful monuments which pictorially record the domestic customs of ancient times.

One of these paintings is peculiarly interesting. It depicts the visit of an Ethiopian princess to the Egyptian Court. Her chariot is very similar to that which was used for war, and it is fitted with quiver and bow-case, these being weapons where-with her male attendants could defend her. She is driven by a female charioteer, who seems to have been intended more for show than for use, inasmuch as the real guidance of the animals is confided to one of the male escort. Over the head of the princess is seen a great umbrella, made of feathers, which was then, as it is now in many parts of the world, the ensign of royal rank. The horns of the oxen which draw the car have been removed, and their heads covered with closely - fitting caps, evidently richly embroidered.

In India at the present time the ox is similarly used for the conveyance of females of high rank. The cars themselves, though comparatively simple, and constructed without any care for lightness, are of the most costly character, being completely covered with silver plates, even the curved pole being similarly adorned. The harness is of the richest description, and so are the silken hangings with which the bodies of the oxen are covered down to the very hoofs. Tassels hang from the heads of the animals, and their horns, instead of being cut off, like those of the Ethiopian ox, are tipped with elaborate ornaments of embossed gold and silver. Several of these magnificent carriages were shown

in the Indian department of the 'Colinderies' Exhibition of 1886.

To those who had studied the records of ancient Egypt, these cars were of peculiar interest as being the analogues of those which were represented on the Egyptian monuments, while to most of the spectators the use of oxen in these costly conveyances afforded only cause for ridicule.



BULLOCK CART (INDIA).

Simple ox-carts, called 'arabas,' are much in use in different parts of the East. Of the oxen, Mr. H. C. Barkley writes as follows :

'Nearly all the draught work is here' (i.e., in Bulgaria) 'done by bullocks, and the ground ploughed by them. They are just the beasts for the

Turk, for they never hurry, and their slow, lazy walk suits their sleepy driver to perfection. Besides these bullocks, every well-to-do Turk has a drove of "water-buffaloes," huge, black, fierce-looking creatures, with long, flat, curved horns. Their looks greatly belie them, for they are the most quiet, good - tempered animals that man ever made a slave of.

' They are far more prized than the bullocks, for they are much stronger, more willing (for they never sulk as the bullock does when tired), and, besides, they give more and richer milk.

' They are good, useful beasts, but not quite perfect for the Turk, as they require much more care. In winter they suffer greatly from the cold, and have to be shut up at night in warm stables, and even when at work have to be covered up with rugs from head to tail.

' Again, in summer, they are wretched when out of water, and must have a good blow-out about every hour ; their hides crack if the sun shines very hotly upon them, and they have to be plastered all over with mud to prevent this. Only let them get to water, the muddier the better, and they are quite happy, and grunt and roll about in it for hours. They can waddle through the deepest morass, can swim for miles, and can float well out of the water, or sink themselves under till nothing but their damp black noses is above the surface, and in this position will sleep for hours.

‘I once saw a dignified old Turk driving his wife in an araba, drawn by a pair of these buffaloes, approach a small deep lake over a steep bank. The day was broiling hot, and it was as much as the poor beasts could do to drag them up the hill, and they quite staggered along ; but no sooner did they see water than off they set at a lumbering trot, and there was no stopping them.

‘Out jumped the Turk in front, and out jumped his wife behind. The man whacked them on their snouts, and the woman poured down abuse on them, reviling their mother, their sisters, and their father ; but it was of no good. On they went through the slushy marsh flop into the lake, and then, after drinking enough to float a gunboat, quietly composed themselves to sleep, with the araba full of the Turk’s bedding and other things floating behind them.

‘This was about eleven a.m., and when I repassed on the same road at four p.m. they were still in the same position, and Mr. and Mrs. Turk quietly sitting on the shore waiting till they should think fit to come out.’—*Five Years in Bulgaria.*

CHAPTER XV.

MAN AND THE OX (*concluded*).

Oxen used for riding—The Kafir on ox-back—European ox-riders—Dr. Livingstone's description—‘Saddling’ an ox, and resistance of the animal—Training the horns—Marking cattle—Ear-clipping—Branding—Branding oxen in Ancient Egypt—An animated scene—Australia and Egypt—Half-wild cattle—The ‘Bulls of Bashan’—Catching wild cattle—The lasso and the bolas—Bull-fighting in Ancient Egypt—Worship of the ox—The bull Apis—Death, funeral, and renewal of Apis—Cambyses and Apis—Discovery of the mummy—The ‘Golden Calf’—The Hindoo and his bullocks—Colonel Campbell's story—The force of superstition.

WHEN travelling in a cart drawn by oxen seems strange to English minds, much more strange must it be to see the ox used for riding purposes.

Such, however, is the case in many parts of Africa, where, indeed, no other mode of transit exists. Dr. Livingstone was obliged to make use of the riding ox in many of his journeys, and his descriptions of the process are very amusing. No saddle is used, and the natives contrive to balance themselves on the sharp-edged spine of the animal, their arms stretched out as balancers, and jerking up and down

at every step, just like one of the figures in Rosa Bonheur's picture, the 'Horse Fair.'

Europeans, however, cannot sit a bare-backed ox, and so a compromise for a saddle is made by strapping some cloths on its back. This is no easy task, as the skin of the ox is so loose that even when



OX READY FOR RIDING.

employed as a pack-animal the burden has to be strapped with the utmost firmness. Similar precautions have to be taken when the ox is fitted with cloths for a European rider. The straps used for this purpose are of very great length, so as to pass several times round the body of the creature.

Two natives are needed for the task, which,

though troublesome and tedious, seems to cause the keenest enjoyment to the operators. One man stands on either side of the ox, and the cloths are thrown over its back, a third holding it by a stick passed through the cartilage of the nostrils. A leatheren rope, or 'reim,' as it is called, is then passed round the body, the two ends being in the hands of the harnessers. Each man putting one foot against the side of the ox, they haul against each other as tightly as they can, passing the reim repeatedly round the ox so as to reduce its girth materially. The ox has a natural objection to being reduced, and, by swelling out its lungs to the utmost, resists as long as it has the power. At last, however, the necessity for respiration compels it to relax the muscles of its chest, and then the reim is tightened afresh, the process being repeated until the ox is reduced to the requisite girth.

Sometimes, when the traveller is the fortunate possessor of an English saddle, his dark-skinned grooms succeed in bracing the hide of the ox so firmly that it cannot slip, and the saddle can be put on over the reims and cloth. As there would be danger of the rider being impaled on the horns of the ox in case of the animal's falling, the natives train them forwards as soon as they begin to grow, sometimes nearly severing them from the head, so that they hang loosely on either side of the face. The Kaffirs have wonderful skill in the management of the horns of their cattle, splitting them into

several portions, and forcing them to grow in various fantastic patterns, so that they can be the more easily identified.

The mention of identification brings us to a practice which we do not need in this country, where population is thick, the fields are small, and only a few animals are kept together. But in the great grazing grounds of the world—say, for example, those of Australia or the Far West of America—the cattle are numbered by thousands, and there are no barriers whereby the cattle of different owners can be separated from each other. The same can also be said of the horses, and it is therefore necessary to have some method of marking the individual members of the herds or flocks, so that each owner can identify his own animals. The ‘ruddle’ lettering which we use in this country would soon be obliterated in that wild land, and therefore some permanent mark must be made.

In the case of horses and sheep, the ear is mostly clipped in a peculiar manner by a pair of nippers similar to those which are used by ticket-collectors on the railways. Each owner has his own mark, which is legally registered, and entered into a book which is published at regular intervals, a copy being in the possession of every cattle-owner. Specimens of these books and of the nippers which are employed in making the marks were shown in the ‘Colinderies’ Exhibition.

With horned cattle, however, which cannot be

approached closely, a much more conspicuous mark is required, and this object is attained by an iron brand, which is heated in a fire, and pressed against the side of the animal. Such a mark is impressed for life, and though the operation is painful at the time, it scarcely lasts a couple of seconds. The periodical branding of the cattle affords a most exciting sight, the horsemanship of the drivers being really marvellous, as with their short-handled, long-lashed 'stockwhips' they separate the unmarked animals from their companions which have already undergone the painful process, and drive them into the enclosure wherein the branding is conducted. Sometimes horses as well as cattle are branded.

A most vivid and graphic description of the scene is given in Henry Kingsley's 'Geoffrey Hamlyn,' and it is positively startling, after reading it, to come upon a painting executed three thousand years ago, in which there is the very scene translated into ancient Egypt. There are the cows lying on their sides with their legs bound. There are the calves trying to force their way to their prostrate mothers, and kept back by the operators, some of whom have hanging on their arms the cords with which other cows have yet to be bound. There are the fires with men heating the metal branding-tools in them, and there is the actual operator in the act of pressing the heated implement into the sides of the animal.

There is now before me the *Illustrated London News* of May 14, 1887, containing a sketch which,

although it depicts a horse-breeding station of Australia in the present day, and the animals are horses instead of cows, is almost a reproduction of the old Egyptian painting. There are the mares and their frightened foals ; there is the horse, lying on its side, with all its feet tied together ; there are the irons being heated in the fire ; and there is the operator pressing the heated branding implement against the animal's side.

In Egypt, as well as in many parts of Syria, the cattle were allowed to run nearly wild during the greater part of the year, and, in consequence, reverted to many of their wild habits. See, for example, the familiar passage, Psalm xxii. 12, 'Many bulls have compassed me, strong bulls of Bashan have beset me round about,' the latter part of the passage referring to the well-known bovine habit of forming a circle round any strange object, and gradually closing on it.

When these animals were wanted, they were captured by a rope which was sometimes used as a lasso with a noose, but sometimes armed with a weight at the end, exactly like the 'bolas' of the modern Patagonians. This is clearly shown from a painting which represents the capture of a wild bull. The hunter has flung his 'bolas,' and is holding one end in both hands, while the weighted end has passed over the animal's horns, and is swinging round its neck.

Like men of modern times, the ancient Egyptians

employed these wild bulls for sport. These sports, however, were not nearly so cruel as those of the present Spain, or of our country in the last century. The bulls were not systematically tortured to madness, causing the destruction of many horses before the animals were relieved of their sufferings by death. Neither were they fastened to the ground and baited by dogs. The sport bore some resemblance to the cock-fighting and dog-fighting of England, and to the combats of elephants, quails, and even certain insects, which delight the public in many parts of the world. The animals are not subjected to torture, but are merely instigated to exert their natural instincts of combat.

Several figures of such bull-fights are to be found depicted on the Egyptian monuments, and show a thorough acquaintance with the subject. Each bull is attended by its own keeper, who urges it on to battle. Everyone knows that when bulls fight they keep their heads as low as possible, each trying to get its horns under the throat of the adversary, so as to wound it by a toss of the head upwards. In one of these paintings a bull is represented as having been successful in his strategy. He has struck his horn completely through the neck of his adversary, whose fore-feet are lifted off the ground by the force of the blow.

Inducing animals to fight for his amusement is not a pleasant phase of the dominion of man. But it is a phase that ought not to be passed over entirely,

as it has lasted from time immemorial, and seems likely to last for many years longer. Moreover, it is a phase of no small importance when we consider the relative bodily powers of the animals which man compels to fight to make him sport.

Yet another phase of the dominion of man—a phase which is remarkable for its singular self-contradiction. I allude to the divine honours paid to the ox-tribe in various parts of the world.

The origin of this worship is lost in the mists of antiquity, but the oldest historical records mention the worship of the ox as a long-established religion. There is, of course, no doubt that the wise never worshipped the ox or any other animal, but only paid reverence to the divine attribute of which the animal was the acknowledged symbol. As P. J. Bailey says in 'Festus' :

'All animals are living hieroglyphs ;
The dashing dog, and stealthy-stepping cat,
Hawk, bull, and all that breathe, mean something more
To the true eye than their shapes show, for all
Were made in love, and made to be beloved.'

Similarly, the Egyptians deified the cat, ibis, crocodile, and asp, which were mere symbols to the educated. But the mass of mankind is absolutely incapable of abstract ideas, and thus there can be no doubt that the generality of the ancient Egyptians did actually worship the animals themselves. The worship

of the ox seems, however, to have been confined to the single individual, namely, the sacred bull Apis, which takes so important a place in history.

Only one Apis existed at a time, it being considered as the incarnation of the god himself (much like the white elephant of Siam), and treated with all the honours due to divinity. When the bull died, all the nation assumed mourning, and the body of the animal was embalmed, and buried with as much pomp as if it had been that of the reigning Pharaoh himself. After the funeral, the nation retained their mourning garb until a new incarnation of Apis had been discovered. He must be of a certain colour, and possess certain marks on different parts of his body. When the priests had at last satisfied themselves that Apis was again incarnated, they brought the bull with great pomp to Memphis, where he was solemnly installed, amid the rejoicings of the people.

Now comes one of the astonishing romances of history which have within the last few years brought the past and the present face to face. They began with Bruce's travels in Egypt. Then, after a long interval, came Layard's discovery of the buried Nineveh and its strangely-written records. Next came Schliemann's discovery of Troy and its buried treasures, and then a series of Egyptian discoveries even more startling than those of Bruce. The exquisitely-decorated sarcophagus of alabaster which had contained the body of Seti I., the father of the

great Rameses II., had long been in the Soane Museum, and in June, 1880, the bodies of both these mighty Pharaohs were unrolled at the Boulak Museum.

About five hundred years after the death of Rameses II., Cambyses conquered Egypt, and, in the plenitude of his exultation, he struck the then Apis with his sword, inflicting a severe wound in its thigh. Almost immediately afterwards, he accidentally wounded himself with the same weapon in the same manner, and soon died of the injury. Apis, however, outlived Cambyses for some years, recovering from the wound, and, according to certain tablets at Serapeum, surviving until the fourth year of Darius.

Now comes the romance of history. When Christianity became the prevailing religion of the country, the over-zealous, not to say fanatical, Christians tried to obliterate all memories of the ancient idolatries, ransacked the sacred tombs, and destroyed every Apis-mummy which they could find. In 1850, M. Mariette discovered a great store of hidden mummies, and among them was an Apis which the iconoclastic Christians had not found. On examining the body, it was discovered to be that of the very Apis which had been wounded by Cambyses and had outlived its intended murderer. The more than half-mad despot must have struck with very great force, as the injury extended to the bone, which, even after the lapse of so many years, bears the unmistakable signs of injury and healing. The

sarcophagus of this Apis still remains in the Serapeum of Sakkarah.

To us, the Apis of the Egyptians must always be peculiarly interesting, as it was the 'golden calf,' the favourite idol of the Hebrews, to which such frequent reference is made in the Old Testament.

Among the Hindoos of the present day the worship of the ox is carried out to an extravagant extreme. Not contenting themselves with accepting a single individual as the representative of the race, they pay divine honours to one and all of the animals. Especially is this the case with the sacred Brahmin bulls, which do no work, and are allowed to wander about the streets at their own sweet will, no one daring to cross their wishes. They help themselves to the best fruit and vegetables in the market ; everyone makes way for them, and if they choose to lie down in a crowded thoroughfare, they completely stop the traffic, as no one will dare to disturb so sacred an animal. The oddest part of this ox-worship is its utter inconsistency, the Hindoo not having the least scruples in working, or even torturing, the very beast which he worships. In his 'Indian Journal,' Colonel W. Campbell puts this point very forcibly :

'On our way down the pass, we found an unfortunate baggage-bullock that had dropped from fatigue in ascending the mountain, and had been left by its inhuman master to die on the road. It appeared to

have lain there for some days, for, although it still breathed, its eyes had been picked out by the vultures, and its carcase was swelled and bloated, as if already half-corrupted by the intense heat.

‘ As there were no natives in sight to execrate the sacrilegious act of slaying a sacred animal, I took the liberty of putting it out of pain by shooting it through the head. This I considered an act of mercy. But, had the benighted pagan who drove the poor animal to death been witness to the deed, his blood would have run cold with horror, and he would have looked upon me as something worse than a murderer—a demon in human shape—a wretch abhorred by gods and men.

‘ He worshipped that blessed animal. Before starting on the journey that caused its death, he consecrated his house by sprinkling the floors and door-posts with water in which a quantity of the animal’s dung had been mixed ; he concluded his morning’s devotions by smearing his breast and forehead with sacred ashes, prepared from the same substance ; and thanking God that he is a good Hindoo, he lays upon the back of his half-starved bullock a load sufficient for a camel, and goes on his way rejoicing.

‘ He reaches the foot of the mountain pass, and the over-laden bullock, already tottering with fatigue, commences the toilsome ascent. By dint of a vigorous application of the goad, the first mile is accomplished ; but here the strength of the poor brute

fails, and, sick and bleeding, it lies down to rest. The good Hindoo assails the object of his worship with kicks and curses, and by twisting its tail until the joints crack, he succeeds in getting it once more upon its legs.

‘Another half mile is accomplished, but nature again fails, and again the overtasked brute sinks under its load. Kicks and blows are once more resorted to, and the tail is twisted with savage energy until each individual joint is dislocated or broken, but the patient brute only replies with deep groans.

‘The devout Hindoo is at his wits’ end, and, in the extremity of his wrath, he even dares to curse the Brahmin bull that begat this unsainted bullock. He fumbles in his pouch, and discovers a fresh chili. A gleam of hope lights up his swarthy features; he cuts the chili in two, and squeezes the juice into the eyes of the fainting animal. The tortured brute, bellowing with pain, makes a last expiring effort; he regains his feet, staggers on another half mile, and sinks to rise no more.

“It was his fate,” remarks the self-satisfied Hindoo, as he leisurely unstraps the heavy burden from the back of the dying brute and distributes it among the other bullocks of the drove. And satisfied that he has done his duty towards the sacred animal, because he refrains from cutting its throat and leaves it to die a natural death, he proceeds on his journey, giving thanks to Vishnu that he is not a slayer of

oxen like the accursed Kafirs, whose beards he defiles. The vultures indeed—those sons of unclean mothers—may pick out the unfortunate bullock's eyes, or some unbelieving Kafir may choose to run the risk of eternal damnation by blowing its brains out, but that is no business of his; he is a good Hindoo, and, happen what may, the sin of slaying the blessed animal lies not at his door.'

Lady Burton mentions, in her 'Egypt and India,' that she hardly ever saw a working bullock in the East whose tail was intact. Some of them had actually lost part of their tails by continual twisting, and all had the joints broken and dislocated.

The reader may perhaps wonder why the worship of animals should be given as an example of man's dominion over them, worship being in its essence an acknowledgment of inferiority. So it is, but it must be remembered that I began by premising that such worship, like idolatry, is radically inconsistent. The bull could not be Apis without man, and, indeed, judging from the very peculiar marks which were necessary, it is tolerably evident that some of them at least were artificially produced, and that the delay in finding a new Apis can therefore be explained.

So it is with the Hindoos and their worship of the ox at the present day. Man has elevated certain animals to divine rank, and for this purpose has most inconsequentially exercised his dominion over them.

CHAPTER XVI.

MAN AND THE FLOCK—THE SHEEP AND
CIVILIZATION.

Reflex influence of animals on man—The flock and the Arab—Nomads converted into permanent inhabitants—Changed ambitions—Arab sheep-owners—Peace and war—A better use of arms—The milk of the flock—Eastern sheep-folds—The cave and the enclosure—The gate and the 'porter'—Enemies of the sheep—Eastern shepherds—Calling the sheep by name—David, the shepherd-poet—Watering the sheep—Assemblage at the wells—English shepherds—Short lives of English sheep—Non-progressive character of Oriental sheep-breeding—Development of a new race of mankind—Failure of Spain—Transplantation of the sheep—America, Australia and New Zealand—Rapid increase of the sheep—A week's wool-sale in Boston—The 'Land of the Golden Fleece'—Collateral vocations—The shipping interest—The factory—Fifty years of sheep-culture.

In the 'flock,' by which term we designate the sheep and goats, we find a still more remarkable example of the influence exercised on man by the very creatures which he has subjected to his dominion.

In the course of ages, he has induced the sheep and the goat, each originally a wild, rock-loving animal, to remain with him, to subject themselves to his care, and to depend almost wholly upon him for

their daily food. On the other hand, these creatures, when domesticated, have an almost equally powerful influence on man. Though he has taught them to live with him, he, on the other hand, is obliged to live with them. ‘Where his treasure is, there is his heart also.’

The possessor of cattle can traverse considerable distances in his raids, as we see in the old ‘cattle-lifting’ exploits of the Borderers and Highland ‘reivers.’ Sheep, however, are so slow of movement, and need such care, that they tie their owner to the soil. The possessor of a flock can no longer be a wild man, and no more can ‘his hand be against every man, and every man’s hand against him.’ He has no time to spare in leading a life of rapine; finding that he must devote the whole of his days and much of his nights to the care of his flock. He cannot altogether forego the use of weapons, but he employs them for a different purpose. He no longer uses them with the object of robbing his neighbours, but takes to arms for the purpose of opposing those who want to rob *him*, be the robbers men or beasts. His flock has compelled him to look on peace as the choicest of blessings, whereas, in former days, he despised peace as unmanly, and war was the normal condition of his existence—the very breath of life to him.

The possessor of a flock need no longer seek a precarious existence by brigandage, or at best by the chase, for his flock supplies him and his with

food, clothing, and shelter, and his ambition is not to become a renowned warrior, but to make himself an owner of vast flocks. He can achieve this end much more quickly and securely by breeding the sheep for himself than by stealing them from others, and this can only be done in times of peace. Such a man was Abraham in the days of old, and such men are plentiful in the East at the present day, so that those who possess the inclination, time, and means for travel can, in a few days, be sitting in the tents of Arab sheyks, such as was Abraham before he received his call.

As we have noticed with regard to horned cattle, the milk of the sheep, rather than its flesh, affords the principal nourishment of an Arab sheyk and his family. The milk of the sheep is peculiarly rich, too rich, in fact, to be much in favour in this country. Yet there are some parts of England where it is held in high esteem, and, in Scotland in particular, it is much used for making cheese. In the East the milk is used in a manner identical with that which we have seen as prevailing among the Kafirs, being curdled, mixed with meal, and boiled into a sort of porridge.

The flesh of the sheep is seldom eaten even by the owners of the flock, except on the arrival of a stranger, when it is a point of honour to kill a lamb in honour of the guest, or even a sheep, should several strangers be entertained. This custom was in full force in the time of Abraham, had existed for

many centuries before he was born, and is likely to prevail as long as the East continues to possess the same climate and to be inhabited by the same races.

As the flocks increased in number, and as wild beasts and wilder men made continual raids on the sheep at night, it became necessary to provide some stronghold in which they could be kept after sunset. In the hill-country of Palestine there are many great natural caves, large enough, as we read in the Old Testament, to accommodate formidable bands of freebooters, such as David commanded when he was outlawed by Saul. These caves can easily be guarded, and are therefore exactly suited to the wants of sheep-owners.

In the other parts of the country it is necessary to build folds for the special purpose of protecting the sheep at night. We in England, whose idea of a sheepfold is a temporary enclosure made of movable hurdles, can hardly realize the full meaning of many Oriental phrases (not necessarily Scriptural) in which the fold is mentioned.

I need hardly mention that in the East the sheep are not driven by the shepherd, but follow him, he singing or talking to them the while, so that they may know his voice. Moreover, each sheep has its own name, and will come when it is called, the whole flock betraying fear when a stranger calls to them.

At nightfall several shepherds will seek the shelter of a single fold, each being followed by his flock. The fold is a large enclosure, surrounded by a high wall, and entered through a gate, which is guarded by "porters," *i.e.*, doorkeepers. A watchman is also on guard, so that no enemies can approach without discovery. Wild beasts, such as wolves and sometimes bears at the present day, are effectually checked by the wall, and, in the olden times, the lion himself was among the ravagers of the flock. Robbers would not attempt to enter the guarded gate, but would scale the walls, and so steal the sheep.

In the morning, when the wild beasts have gone back to their dens, and the robbers have sought their hiding-places, the shepherds enter the fold and bring out their flocks. This they do separately, one entering first and calling out his sheep by name until the tale is complete. Another then enters until all the flocks have been called out.

Although artificial feeding is seldom if ever employed in the East, the shepherd has to spend his whole life in looking after his flock. He has to be acquainted with all the pasture lands within many miles, and to take the sheep from one to another—a duty which has evoked much symbolic imagery, especially in some of the Psalms, which were written by one who, during the years of his youth, had been a shepherd himself, and, as we learn from many passages, had not only led his flock to fresh pastures, but had risked his life for the sheep by killing the

lion and bear which attacked them. Psalm xxiii. is as essentially the work of a shepherd-poet as are many of Burns's compositions the work of a practical ploughman.

Moreover, the Eastern shepherd has daily to perform a task from which our shepherds at home are free. In this country the sheep do not need to drink, the morning's dew upon the grass affording them all the moisture which they need. But in the East water is necessary for the flocks as food, and every day the shepherd has to lead his sheep to water. This task, albeit the most pleasant part of a shepherd's daily work, is nevertheless a laborious and a tedious one, according to our ideas, though, as no Oriental is ever in a hurry (except at a funeral), or has the least idea of time, we cannot rank tediousness among the discomforts of a shepherd's life.

In Palestine wells form the only means of supplying the flocks with water, and these wells are few, far apart, and jealously guarded, being carefully covered so as to avoid pollution of the water, and the cover not being removed until all the flocks are assembled. In some cases, when the number of flocks is great, the shepherds are apt to quarrel, and even come to blows about precedence. Then the water has to be drawn from the well, carried to the sheep-troughs, and continually poured into them until the sheep are satisfied.

As the well is also the only source whence the women can obtain water for their households, the

whole feminine population of the neighbourhood are obliged to assemble at the well daily until they can fill their great jars, which they balance so gracefully upon their heads. Hence the importance of the well in Scriptural narratives, while the picturesque character of the scene when all the flocks with their shepherds have assembled, and the women are carrying off their filled jars, can easily be imagined.

Many kind-hearted persons, on being made acquainted with these details of pastoral life in the East, have wondered why our shepherds cannot be as familiar with their sheep as are those of Palestine.

The reasons—for there are many—are simple enough. In this country there is no need for leading the flock from pasture to pasture, there being always plenty of fields which are devoted especially to sheep-grazing. Neither is there any need for the daily journey to the well. Neither are the sheep mixed with those of other flocks at night, so that they must be separately withdrawn in the morning.

Another and even a stronger reason is that there is no time for an English shepherd to teach the members of his flock their special names, and train them to come to his voice when he calls them by name. As Dr. Thomson remarked, to teach a sheep to come when called is a work of time. With every flock there are many 'wild' sheep, that is, animals which have not had time to learn this lesson.

In this country, instead of feeding on the milk of the sheep, we eat its flesh, and therefore an English

shepherd would have no time to train his charge as is done by the shepherd of the East, because the owner of the sheep cannot afford to keep them long enough. ‘Five-year-old mutton’ is a luxury which can only be afforded by private persons who do not make their living by sheep-breeding, and very few sheep, except those specially used for breeding, are allowed more than two years of life. Just, then, as a sheep had learned its lesson, it would be sent to the butcher and its education ruthlessly cut short.

The reader will now see how important a factor in civilization is the sheep, and how completely it ties its owner to the soil.

Even up to this point the benefit conferred by the sheep on man is beyond all price. But, after reaching a certain stage, which was attained at least three thousand years ago, the development of sheep culture stopped, and mankind were no better for it for many successive centuries. It is true that large flocks were kept, and that great numbers of human beings were fed on the milk and clothed with the wool. But these benefits, great and important as they undoubtedly are, have yet the fatal drawback to progress that they are limited to a comparatively small number of human beings, and are confined within comparatively small bounds.

The wealthy Arab sheyk—Abraham, for example—was able to feed his numerous retinue, and to furnish them with necessary clothing. But it never occurred to him to feed and clothe the followers of any other

chief, and still less would he have thought of sending the wool of his flocks across the Mediterranean in order to exchange it for commodities which could not be procured in his own country. He simply lived a family life—the family being certainly a large one, but practically isolated from surrounding families.

Another and a more energetic race had to be gradually evolved before the sheep could play its full part in the history of the world—a race which would transport the sheep into realms unknown to the Orientals, and which would never have been discovered, much less populated, by any Eastern race. This task was begun by Spain, but soon abandoned, simply because the Spaniards, enterprising as they were, always wanted to get back to Spain as soon as they had gained as much as they could by plunder. They could destroy, but they could not substitute a better order of things in place of that which they had overthrown. As to settling in the conquered country, and making it their home, such an idea never entered their imaginations.

Then came that strangely mixed race which, for want of a better title, we call the Anglo-Saxon, which did more with the sheep in fifty years than all the other races of the world have done in as many centuries.

Not only was the sheep transplanted into America, but it was taken to the Antipodes, and acclimatized in Australia and New Zealand. In all these countries

it is increasing with almost incredible rapidity, and is materially altering the physical geography of the locality. Take, for example, New Zealand. Not quite a century ago not a mammal, man excepted, existed in the group of islands which we know under the common name of New Zealand. In 1884, more than thirteen million sheep existed in New Zealand, beside seven hundred thousand cattle, together with horses and dogs in corresponding number. In Australia the number of sheep is almost beyond count, and America is equally prolific.

The wool of these sheep is not confined to home consumption, as is the case with Oriental sheep-owners, but is sent to all parts of the civilized world. In Boston, U.S.A., for example, the sale of wool for a single week was, according to the *Boston Journal* of August 28, 1885, four million six hundred and thirty thousand pounds, being more than a million pounds in excess of the sales in the corresponding week of the previous year. Compare this statement of the sale of wool in a single market in a single week with the aggregate sales of all the markets of the world throughout the year, and some idea may be formed of the value of the sheep to mankind in the present day. Well may one of our own writers and travellers call Australia the 'Land of the Golden Fleece,' a title which may with equal justice be conferred on New Zealand.

Nor is this all. A host of collateral avocations have become attached to the trade in wool, and the

means of supporting human life are proportionately increased. Whole fleets of shipping are required for the mere transport of the wool, so that the mechanics who build and rig the ships, and the sailors who work them, are indirectly supported by the sheep which have been transplanted by the Anglo-Saxon race into countries which, fifty years ago, were absolutely useless to the rest of the world.

The same may be said of the vast factories in which the wool is manufactured into thread, and which, besides having afforded means of subsistence to the bricklayers, masons, and carpenters who built them, give constant employment to hundreds of thousands of operatives. Then we come to those who make their living by weaving the wool into various fabrics, together with upholsterers, tailors, dressmakers, and so forth. I will not say if the sheep were exterminated, but if only the supply of wool were stopped for a single year from America, New Zealand, and Australia, millions of human beings would be reduced to abject poverty, many would die from want, and the progress of the world would receive a check from which it could scarcely recover.

For one human being who is supported by the sheep under the Oriental system, ten thousand owe their living to it under the management of the Anglo-Saxon. This almost incredible development of the sheep as an aid to civilization has taken place

within the last fifty years, and it is a remarkable coincidence that the lines are written within a few hours of the jubilee-day of Queen Victoria. So, powerful as may be the dominion of man upon the sheep, the reflex influence of the sheep on man is nearly as important.

CHAPTER XVII.

MAN AND THE FLOCK.—THE SHEEP (*concluded*).

Breeds of sheep—The primitive form—The Nejd sheep—Syrian sheep—Horn of the ram—Its peculiar form—Uses of the horn—The ‘shophar,’ or ram’s-horn trumpet—The ‘horn of oil’—The powder-horn—The Scotch ‘mull’—Tail of the Eastern sheep—Tail-fat among the Arabs—Tail-carts—Breach of the Sabbath—Improvement of breeds—Influence of sheep on pre-existing fauna—Extinction of the bison and expulsion of the kangaroo—Fecundity of the sheep—Two prolific ewes—Effect of the sheep—The aborigines—Horned sheep of Scotland—Scotch shepherds—The Merino sheep—Care required in rearing it—The annual importation—An enterprising flock—Merino rams—Their formidable horns—Order of battle—Wool of the Merino—Mixture with English, Australian, and New Zealand breeds—Sheep in Ancient Egypt—Shepherds an abomination to the Egyptians—Pugnacity of the ram—Fight for the harem—Strange social customs of the East—Ram-fighting as a sport.

As with the dog, the horse, and the ass, man’s power over the sheep is strikingly manifested in the different ‘breeds’ which are so earnestly discussed by connoisseurs.

Of the original form of the sheep we are wholly ignorant. As has already been seen, we do know the primitive horse and dog, and can form some conjecture as to the primitive ox. But, as we shall pre-

sently see, not only are we absolutely ignorant of the primitive sheep, but we cannot find any distinct line of demarcation between the sheep and the goat. The nearest approach to the sheep, as distinct from the goat, is probably the animal which is depicted in Lady Anne Blunt's 'Pilgrimage to Nejd,' a slightly-built, long-legged, Roman-nosed, long-eared, big-tailed creature, very unlike the breeds on which we pride ourselves in England. The Syrian sheep of the present day is probably little changed from that of Abraham's time. Its curved and flattened horns, which curl round its ears, are especially interesting as furnishing the 'shophar' or ram's-horn trumpet, which plays so important a part in the Jewish ritual.

A horn of this peculiar form is especially likely to be entangled in the branches of a thick bush, such as are still plentiful in Palestine, as is narrated in the story of Isaac.

The ram's horn is of no small importance in the East. Now, as then, it is used for holding oil, which is one of the prime necessities of Oriental life. It is invariably used in cookery, making a part of every dish ; it is burned in the simple lamp of the East, is used for application to the hair ; and, as is the case in many hot countries, is constantly rubbed into the skin, especially after bathing. It is also thought to be a panacea for wounds, and probably is useful as excluding the air. Besides, then, the oil which is kept in the house or tent in jars for cooking purposes,

nearly everyone carries a supply of oil with him, keeping it in a hollow ram's horn. The wide end is securely corked, and a small piece is cut off the tip, so as to leave a small hole through which the oil can flow, the aperture being closed with a stopper. So we frequently find Scriptural allusions to the horn of oil as an article which everyone is supposed to carry on his person.

It is used for a similar purpose at the present day, and is also employed for holding gunpowder. In our own country, when firearms were in their infancy, a finer kind of powder was used for priming, and was carried in a similar horn, the aperture at the small end being closed by a spring-key, like that of a flute. I need hardly remark that the Scotch snuff-mull of the present day is made from a ram's horn.

This sheep, also, has a very large tail, which in some breeds is so loaded with fat that the weight of the tail alone will equal one-fifth of that of the entire animal. Canon Tristram states that this fat is very highly valued by the Arabs, who use it for a variety of purposes, such as cooking, oil for lamps, etc. They even eat it by itself, cutting it into slices, and frying them, though, as the narrator remarks, it very much resembles fried tallow.

In some parts of the world, especially in Southern Africa, the tails of the sheep are so large, and so highly valued, that they are supported on little two-wheeled carts, somewhat like our costermongers' trays. That a similar system once existed in Syria,

is shown by a passage in the Mishna, which forbids these sheep from being let out of their folds on the Sabbath, because they would profane the day by drawing a cart. This is the 'fat tail' which is mentioned in the book of Leviticus, and is correctly rendered in the Revised Version. One writer graphically describes it as looking as if the whole body were



FAT-TAILED SHEEP.

continued beyond the hind-legs, and hung nearly to the ground.

Here, again, is an example of the manner in which Oriental sheep-rearing fails to improve. The Eastern sheep of the present day is little, if at all, different from the animal of three thousand years ago, while we are continually trying to obtain wool of a finer texture, and meat more abundant in quantity and

better in quality. The great sheep-breeders of Australia and New Zealand are extremely watchful in this respect, and will go to very great expense in procuring from England the means of improving their breeds.

In connection with this subject, I must briefly mention the influence of the sheep upon the distant countries into which man has transplanted it. If we put a bison and a sheep side by side, the latter animal will look so totally insignificant in comparison with the former, that no one would, some thirty or forty years ago, have hazarded the prophecy that it would even hold the plains on equal terms with so formidable an antagonist. But it has done more. It has gradually 'crowded out' the bison, and the steady and rapid disappearance of that animal is due much more to the increase of the sheep than to the reckless slaughter by red and white hunters.

The sheep is, for one thing, by far the more prolific animal. For example, there died in June, 1886, a sheep which had produced twin lambs for nine successive years. This animal lived near Herne Bay. Near Monmouth, in June, 1887, a ewe produced four lambs, all of which were strong and healthy. Another produced twenty young in six years, some of her young being necessarily brought up by hand. These are exceptional instances, but they serve to show one of the reasons why the bison has been obliged to make way for the sheep.

In Australia, the kangaroo, the largest indigenous

mammal, has in like manner been expelled by the sheep, so that in these two countries the whole fauna has been largely modified within a few years by the importation of sheep through the exertions of an enterprising race of mankind. As to New Zealand, the sheep has encountered no mammals with which to contend, and so has matters very much its own way. But, both in that country and Australia, the sheep is performing, though indirectly, another task. It brings with it a stage of civilization which, though not a high one, is at its lowest far higher than that of the aborigines ; and, in consequence, the Maori of New Zealand and the 'black fellow' of Australia are doomed, like the red tribes of North America, to be as completely wiped from the surface of the earth as has been the lot of the aboriginal Tasmanian.

Putting aside the various breeds of our own sheep, as being scarcely within the province of this work, I may mention that in England the horn, which is so conspicuous an ornament of most foreign sheep, is entirely wanting even in our rams. We have no use for the horn, and have, therefore, by careful management of the breeds, succeeded in abolishing it altogether. In Scotland, however, the horn is still retained, and I well remember the surprise which I felt, on my first visit to Scotland, to see horns on the heads of sheep hanging in the butchers' shops.

In Scotland, however, the character of the country and the inclemency of the climate have forced the

sheep-owners to treat their animals in a somewhat primitive fashion. The task of the shepherd is a hard and most trying one, and the sheep are much more under his personal care than is the case in England. I have witnessed on the Scotch mountains the very scene of which we read in Scripture, except that snow filled the air and covered the ground, and that the shepherd was clad in modern attire. He had gone, accompanied by his dog, to the rescue of some sheep which had been lost in the snow. The dog went first, so as to avoid the drifts, which had altered the appearance of the whole country. Then came the shepherd, bending over some burden which was evidently a weakly sheep rolled up in the plaid, and behind him came the remainder of the rescued sheep, following his footsteps.

There is one breed of sheep which has exercised as great an influence on our folds as the Arab horse has upon our stables.

This is the Merino, or Spanish sheep, the blood of which was introduced into England some four hundred years ago. We have tried to acclimatize it in this country, but without success, and we are therefore obliged to content ourselves by crossing our own breed with it when required.

Even in its own country, the Merino sheep has to be most carefully tended, and is as confirmed a migrant as the cuckoo or the swallow, though its migrations are necessarily confined to land. The

animal is kept in huge flocks some nine or even ten thousand in number, each being under the command of a single shepherd, who is assisted by about fifty under-shepherds, each of whom has his own subordinates, mostly boys who are learning the business, and plenty of trained dogs. During the summer, the sheep remain in the mountain districts, but about September they begin to march downwards towards their winter quarters. There they remain until the beginning of May, when the lambs, which are mostly born towards the end of March, are strong enough to accompany their parents towards the summer quarters on the mountains.

This migration is by no means the work of the shepherds, but is due to the instinct of the sheep, which, if the shepherds should not be ready for them, are apt to start on their own account, and not wait for their escort. A whole flock has been known to evade the shepherds, and in some mysterious way to reach their old summer quarters without a guide.

The most wonderful part of this exploit was that the flock had lost none of its number, in spite of the wolves, which are always watching their opportunity for carrying off a sheep when they can evade the vigilance of the shepherds and dogs.

I imagine that the truant flock owed its safety to the rams. When sheep pass a half wild life, they always maintain an almost military discipline, the ewes and young being placed in the centre as soon

as the alarm is given, and the rams being drawn up in a V like form, the apex being formed by the patriarch and champion of the flock. No wolf would dare to attack so formidable an array, so that the flock might well be able to take care of its own safety.

The horns, moreover, of the Merino ram are of very great size, curling well to the front, and guarding the whole of the face as far as the nose, so that a full-grown Merino ram is no mean antagonist. Moreover, as the value of the animal lies in its wool and not in its meat, it is not bred for the purpose of making flesh, and in consequence is much more active than the breeds with which we are familiar in England, thus becoming a much more formidable combatant.

Even the Southdown sheep of England possess the same discipline, as I have personally witnessed, having been forced to beat a rapid retreat from a hostile array of rams, all with their heads down ready to charge the supposed enemy. I had come on them unexpectedly in a fog, and as they could not see that I was only a harmless pedestrian who had lost his way in one of the bewildering fogs that roll over the Downs without warning, they took my footsteps for those of a foe.

The wool of the Merino sheep is of wonderful fineness, and grows to a great length. It has, moreover, the remarkable property of growing for two successive years without losing its quality, while its

length is doubled. Such a fleece will weigh twenty pounds, the length of the wool being eight inches.

It is to the judicious admixture of the Merino that our sheep owe the fineness of their wool. The great breeder, Mr. Bakewell, whose name is a household word, first set himself to develop a breed of sheep which should furnish the greatest possible amount of meat; and, having attained that object, he employed the Merino in order to obtain a fine quality of wool. In New Zealand and Australia, where the sheep is bred almost exclusively for its wool, Merino rams have been imported at great expense, inasmuch as competition among dealers in wool is very severe, and the sheep-owner is in consequence obliged to produce the very best quality of wool, or lose his market.

Upon the Egyptian monuments the sheep does not take a prominent part, probably from the fact that shepherds were 'an abomination to the Egyptians.' This, indeed, was the reason why Joseph's brothers were not allowed to eat at the same table with himself. The reason could not have been that they were Hebrews, for he was a Hebrew himself, but that they were shepherds. The cause of this degradation is not very evident, and no explanation is given of it in any of the sacred writings. It has, however, been conjectured that the real reason lay in the wish to throw as much contempt as possible upon the memory of the shepherd kings, who ruled Egypt for so many generations.

As is the case with many gregarious animals, the males are obliged to fight for the mastery of the herd or flock and the possession of the females, this being a provision of Nature for securing the strongest as the parents of the next generation. The victors only retain the position as long as they can hold it, and are at any time liable to be challenged, conquered, deposed and succeeded by a younger and stronger rival, who has already conquered the rest of his own sex.

As to the females, they do not appear to entertain any affection for an individual husband, but look on complacently at the combat, perfectly content to become the property of the victor, whoever he may be. A very similar custom still obtains among uncivilized or even partially civilized nations. It is so in many parts of the East; and even in the times of early Jewish history we find that when one potentate made war against another, the wives of the vanquished warrior were transferred as a matter of course to the conqueror, the transfer being a visible token of victory. This custom, by the way, explains the otherwise almost incredible act of Absalom publicly taking possession of his father's concubines, 'in the sight of all Israel.'

Taking advantage of this combative instinct, man has for unknown centuries employed the ram as a means of affording himself amusement, just as has been narrated of the bull. In most parts of Asia, fighting rams are kept and trained for the sole pur-

pose of combat, being supplied with a stimulating food and 'set' at each other in a way that always arouses the combative instinct.

In her 'Arabia, Egypt, and India,' Lady Burton tells us that in certain parts of India ram-fighting is oddly connected with astronomy. 'Rams' (*bakre*) 'are fought chiefly by Hindoos at the venerable



A RAM FIGHT.

festival called Makur Sankranti, when the sun enters Capricorn, *i.e.*, the winter solstice, which with us means Christmas and New Year's Day. Their horns are covered for dignity with gilt paper.'

The mode of setting them to fight seems rather absurd. The combatants are placed opposite each other at a distance of ten or twelve yards, and handled by the trainer, who stands over the animal,

with one foot on either side, and then strokes its shoulders backwards with both hands. Why this action should goad the animal into fury is not easy to say. However, it has that effect, and as soon as the men loosen their hold, at a given signal, the rams spring forward, each trying to knock its adversary down by its weight and impetus, the heads of the rams coming together with a crashing sound that is heard at some distance. This is repeated until one of the antagonists is stunned, or refuses again to face his foe.

CHAPTER XVIII.

MAN AND THE GOAT.

No real distinction between sheep and goats—Wool and hair—The goat in England—The goat in Ancient Egypt—The goat in the East—Milk of the goat—Children as goat-suckers—Flesh of the kid—Cooking while warm—The goat in Palestine—Goats and sheep on the march—Hair of the goat and its various uses—Covering of the Tabernacle—Skin of the goat—Goat-skin ‘bottles’—Fraud of the Gibeonites—Goat-skin vessels of Abyssinia—Filling a water-skin—The ‘Leather Bottell’—The ‘Black Jack’—Inflated skins used in crossing rivers—The ‘mussuck’ of India—Its value in military engineering—The ‘mussuck’ employed by the Ancient Assyrians—The British Goat Society—Kid *versus* lamb—Best modes of cooking it—Cheapness of feeding—The goat in the stable—The goat as a defender of the flock—Fight between a goat and a jackal—Management of the goat—The milking and feeding-bench—Value of goat’s milk—The average amount yielded by each animal—Mixed diet recommended—Rock salt—Foreign goats and their uses—Turkish and Persian carpets—A singular test of excellence—The Cashmere goat—Cashmere shawls—Hair of the Cashmere goat—Attempts to acclimatise the animal.

In discussing the origin of the sheep, I mentioned that no real distinction existed between the sheep and the goat. At one time the goat was thought not only to be a different species from the sheep, but even to be rightly classed under a separate

genus—namely, ‘*Capra*.’ The presence of the beard, the position and structure of the horns, and the character of the hair, were thought to afford ample grounds for the distinction. To these points some systematic naturalists added the powerful odour of the adult male.

At the present day, however, all these definitions have been found wanting. There are, for example, acknowledged sheep which have beards, and whose horns possess all the peculiarities which were accepted as distinctive of the goat. In some parts of the world the sheep, when imported, begins almost immediately to lose the distinctive woollen character of its coat, and gradually to replace it with undoubted hair, exactly like that of the goat.

In this country the goat is at present an animal of such slight importance, that if every goat in England were destroyed, the effect would scarcely be felt. Its flesh finds no place in our markets, and there is but very slight demand for its milk. On the Continent, however, it is much more appreciated, and of late years a society has been formed in England for the purpose of spreading the knowledge of its value, especially to cottagers in the country. In towns it is not to be recommended, as its incessant bleating makes it such a nuisance to the neighbours that the owner would speedily be forced to abolish it. But in the East it is now, and has been for several thousand years, fully the equal of the sheep in value, if not its superior.

Among the ancient Egyptians, as is shown by many graphic delineations, the goat was a highly appreciated animal. One use to which it was put was to assist the agriculturist in sowing seed. After the waters of the Nile had receded, the sowers scattered the seed broadcast over the wet ground, and then a number of goats were turned into the field and driven backwards and forwards over it, until the whole of the seed had been trodden into the soft soil. (See page 69.)

The milk of the goat is held in high estimation, and is often offered to guests in a fresh state, as was done by Jael when she lured Sisera to his death by an act of treachery almost incredible in an Oriental. Canon Tristram mentions that at the present day milk is offered to strangers, and that to take payment for it would be considered an utterly dis honourable action. Among some of the tribes of South Africa, children are taught at a very early age to make use of goats as their wet-nurses, so that when a child is old enough to take rank as a boy, he is instructed to cease from sucking the goats.

In Palestine at the present day, the milk of the goat is largely employed for the manufacture of butter and cheese. The flesh of the kid is now, as was the case in the time of Abraham, much more used for food than that of any other animal, especially in feasting strangers. As soon as a stranger reaches the tent, he is requested to wait until food can be prepared for him, and a refusal would be considered

an unpardonable breach of etiquette. Little time is wasted, for the fire is always alight, and the cookery is of a very simple kind. A pot is set on to boil, and a kid is caught, killed, and at once prepared for the pot.

It is a well-known fact that if an animal be cooked immediately after being killed, and before the natural warmth has departed, it is as tender as if it had been hung for several days. In France, for example, there is a very excellent mode of cooking the rabbit with prunes, onions, and other ingredients, so as to form a sort of ragoût. When I was living in Paris, this ragoût was frequently served at table, and on inquiry, I found that its peculiar tenderness was owing to the fact that the rabbit was brought into the kitchen alive, and not killed until the whole of the sauce in which it was to be cooked was prepared and heated. The rabbit was then killed, the skin instantly stripped from it, the limbs separated, and the body cut into four portions, the whole operation scarcely exceeding a minute.

Only the male kid is used for food in the East, the females being far too valuable to be eaten. The 'Goat Society' of this country is endeavouring to introduce the kid as an article of food, inasmuch as it is quite as good as lamb, and has the advantage that the cottager can breed, kill, and cook it without the costly intervention of the butcher; the kid being thus treated very much like the pig, which is so valuable an aid to the thrifty farm-labourer.

In some parts of Palestine the goat is kept in immense numbers, and, indeed, constitutes, as Canon Tristram observes, the sole wealth of many villages. Each house possesses several milch goats, the whole of which are driven out in the morning to pasture, and return in the evening without needing to be driven, each goat knowing its own house. They remain in the shelter of the village all night, safe from wolves and thieves, and are milked in the morning before they are driven to their pasture-grounds.

Frequently they accompany the flocks of sheep, and, like those animals, follow, or rather keep pace with, the shepherd. But they are of far too mercurial a disposition to walk sedately after the shepherd in company with the sheep. They separate themselves from their plodding companions, especially when the path which they traverse passes by broken ground. This peculiarity has been admirably described by Canon Tristram, who saw a mixed flock of sheep and goats being taken to their nightly quarters in a cave.

‘The sun was setting, and the sheep might be seen quietly following the shepherd along the beaten and more easy paths, while the goats, in looser order, gambolled and skipped from rock to rock a little higher up on the mountain-side, still keeping in line with the sheep, but delighting to show their prowess; and then, when the cave was reached,

scrambling down by the most impossible routes, and often leaping into it over the backs of their more staid companions.'

Even if the flesh and milk of the goat were useless, the animal would still be valuable, and repay the small trouble which is demanded of those who keep it. The hair of the goat is still spun into thread and woven into fabrics, as it was in the time of Moses, the distaff and spindle being used for producing the thread, and the simple loom—a mere framework of sticks—sufficing for the manufacture of cloth. The reader will remember that one of the coverings of the tabernacle was made of goats' hair, and that the fabric was of peculiarly good quality is shown by the care which is taken to record the fact that all the women who spun the thread (the distaff belonging exclusively to the female sex) were those 'whose heart stirred them up in wisdom.'

Then the entire skin of the goat is in daily requisition as forming the primitive vessels which are used for containing liquids of various kinds, such as wine, oil, water, and milk.

Nothing can be simpler than the manufacture of these vessels (which are unfortunately called 'bottles' in our authorised version of the Bible). The head of the animal is cut off, and so are the legs, one of them being severed close to the hoof. The body of the goat is then drawn out of the skin through the neck, the skin being necessarily turned with the

hairy side inwards. The various apertures are then tightly sewn up, except the neck, which is used as the mouth of the vessel whereby it is filled, and the leg which was cut off at the hoof, and which, being longer than the others, serves as a spout. Both these openings can be tied up so as to prevent the liquid from escaping.

The skin, being again turned, is partially tanned and tested, in order to discover any leakages. The seams are then covered with pitch, and the simple vessel is complete. The hair is retained as a protection to the skin, and, in an old skin, is always worn away in patches. Sometimes, when a skin has endured much rough treatment, it becomes so thin that it bursts, an accident that frequently happens. Or it may be that, in travelling, it may be pierced with a thorn, and in either of these cases it must be mended. Sometimes it is sufficient to merely sew up the injured part, but it frequently occurs that a patch must be inserted and the seams covered with pitch. There is no possibility of mistaking an old skin for a new one, and so, when the Gibeonites deceived Joshua as to the distance which they had travelled, they produced in evidence sacks and wine-skins which were old and mended, as would have been the result of a very long journey. The 'sacks' were also made of goat-skins, such as are used at the present day in Palestine and other Eastern countries.

In Abyssinia, for example, the goat-skin is used

for like purposes, and is prepared in a somewhat similar manner, except that the hair is removed by allowing the skin to undergo a partial putrefaction, when the hair can be easily scraped off with a blunt knife. The apertures having been sewn up with air-tight seams, the skin is inflated with air and beaten and trampled for several successive days, being rubbed the while with butter, so as to render it pliable. I need scarcely mention that a rather peculiar odour and flavour are communicated to water and wine by the goat-skin, but the palate and nostrils soon become accustomed to them, and cease to take any notice of them.

The reader will probably call to mind Don Quixote and his celebrated attack on the wine-skins, which he mistook in his sleep for giants.

Until the eye becomes accustomed to them, these skins, when full, have a most ludicrous aspect, the truncated legs projecting at each corner. In her 'Arabia, Egypt, and India,' Lady Burton narrates an amusing instance of the effect of a water-skin.

'Whilst strolling about Port Said, my German maid, who was in an Eastern place for the first time, came upon a man filling a goat-skin with water. She saw a pipe, and the skin distending with a sound. She had often heard me say how cruel the Easterns are to animals, and, knowing my weakness on that point, she ran after me in a state of great excitement, and pulled my arm, saying,

“Oh, *Euer Gnaden!* the black man is filling the poor sow with gas ; do come back and stop him.”

Although to us of the present day the translation of the Greek word ‘askos’ as ‘bottle’ has been naturally misleading, the translators were really not to blame.

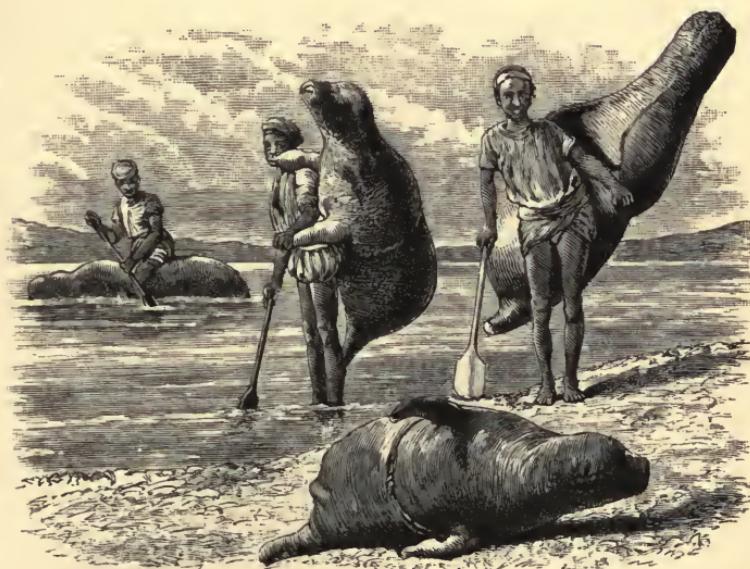
In their days the wine-bottle, with which we are so familiar, was comparatively seldom seen, on account of the expense of glass. The bottles in which wine was stored were almost invariably made of leather, so that one of these leather bottles hung outside a house proclaimed it to be an inn where good wine was to be procured. Several of these simple signs are still to be seen, one of which, the Leather Bottle of Cobham, lately destroyed by fire, has been immortalized in ‘Pickwick.’ Another, which I have frequently seen, is still the sign of an inn near Abbey Wood, Kent.

All lovers of old English songs must be familiar with the fine, jovial ditty entitled the ‘Leather Bottell,’ and showing its many virtues in comparison with bottles made of glass, wood, or any other material. The great ale-jug, called the ‘black jack,’ was also made of leather, and has been so recently abandoned that there are men still living whose fathers could remember the black jack in use when they were boys at school.

These skin-bags have yet another use.

When inflated with air, they are employed as life-

buoys, by means of which the natives are enabled to cross rivers in safety. When heavy weights have to be carried, as well as the man who guides them, the hides of oxen are substituted for those of goats. Such inflated skins, called 'mussucks,' are largely used in India at the present day. Our engineer officers, when employed in the East, and neither



boats, pontoons, nor even casks could be obtained, have found the mussucks most useful in the construction of rafts or temporary bridges.

As a branch of military engineering, this device is by no means new, as may be seen by inspecting the historical sculptures of ancient Assyria. The absolute fidelity of these sculptures has been proved by the discovery of the very weapons and other

implements which are delineated on the monuments. Some of these sculptures lay before us the process which was adopted by an army when crossing a river. The chariots, horses, and armour are carried in boats, while the soldiers divested themselves of their weapons and clothing, and crossed the river by the help of mussucks.

Each mussuck was attached to the waist of the soldier by a strap, the neck of the mussuck being held



ASSYRIA—CROSSING WATER ON INFLATED SKINS.

to the lips with the left hand, so as to keep it inflated, while the right hand was left at liberty, in order to aid the man in guiding his course.

That the goat was thought to be even more valuable than the sheep is shown by the advice given in the Proverbs :

‘ Be thou diligent to know the state of thy flocks, and look well to thy herds. . . .

‘The lambs are for thy clothing, and *the goats are the price of the field.*

‘And thou shalt have goat’s milk enough for thy food, for the food of thy household, and for the maintenance of thy maidens (xxvii. 23, 26, 27).

Though in this country we have as yet failed to avail ourselves of our full dominion over the goat, using it chiefly for drawing children’s chaises at the seaside, it is to be hoped that the exertions of the Goat Society may succeed in overcoming the insular prejudices which cause us to lose the services of this most valuable animal. Experiments have already been made, the society having furnished goats to cottagers on the hire system, and found that the purchasers were prompt with their payments and pleased with their bargains. The question has been well summed up in one of our London newspapers :

‘The price is low, the cost of feeding a goat, especially if there should be a common near, very slight indeed, and the yield of milk excellent. On the Continent, these animals constitute a regular staple of food, and have an incidental value as cheese-producers as well. It is, however, one of our insular and peculiarly British fancies to entertain a prejudice against that flesh which Rebekah cooked for Jacob’s advantage, to imitate the savoury meat which his father loved.

‘Yet, at a certain age, the kid is preferable to lamb, for not only is it just as tender, but it has—

which lamb has not, and which mint sauce is intended to supply—a very agreeable flavour. Some Welsh mutton—the best of it—resembles kid in this respect, and when the latter is properly cooked, there are not probably very many who could tell that they were not eating the Cambrian lambkin.

‘In the East it is, as it always has been, one of the most popular of meats; for Orientals—in spite of the legend that kid, stuffed with pistachio nuts, is an ordinary dish—prefer preparations to whole joints, and like their viands hashed, minced, curried, fricasseed, or skewered in kibabs. Sirloin and saddle, brisket and leg, and so forth, are practically unknown at their repasts; meat in such large quantities has no attraction for them. Kid, therefore, being absurdly cheap, suits their cuisine admirably, and the small animal, with its tiny chops and mimic forequarter, lends itself excellently to ragoût and stew.

‘Of course in the East, as elsewhere, the gourmet looks upon butcher’s meat mainly as a foundation for skilful cooks to work upon with sauces and dressings, and this animal, from its tenderness, affords the best of material for such purposes. Even that skeleton of the cupboard, the good plain cook, could not manage to make kid tough. She might do her worst with saucepan or jack, but the creature would triumph over her, and insist on being tender to the last.

‘Such are the virtues of the beast as food. It has, however, other very admirable points, and one

of these, its milk, is that which especially commends it to the clients of the British Goat Society. The amount given is singularly abundant, considering the size of the animal and the scanty diet on which it has very often to live. Though the flavour of it is so pronounced that some people never get to like it, the majority find it pleasant, and children thrive upon it. The cheeses made from it are some of them well known, and, though thin in quality, are tasty and deservedly popular.

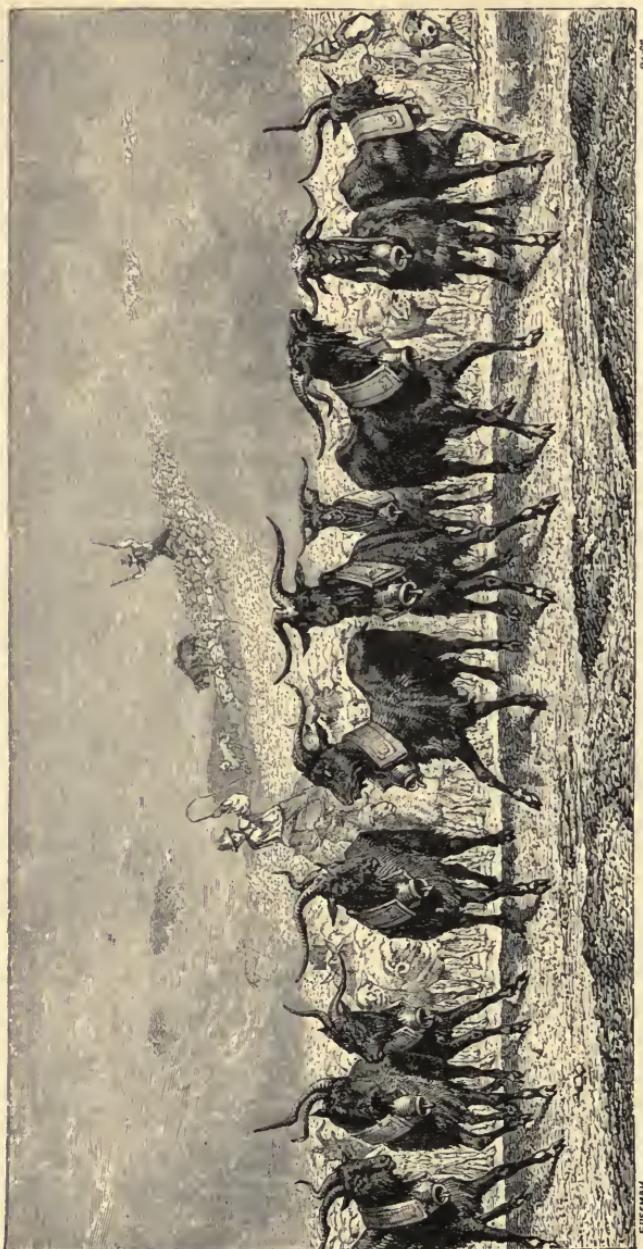
'Above all, however, should be taken into consideration the cheapness of feeding goats, for it is hard to say where one of these animals could not manage to keep itself alive, except on an iceberg. Nearly all over the East they are driven out to pasturage in places where the foreigner can see nothing for the flock to eat. Sandy wastes, rocks, or the seashore, are sometimes the creatures' grazing-grounds, and yet they flourish, give milk, and multiply. An ordinary English hedgerow would feast a flock all the year round, and the Welsh hills would be a paradise for multitudes. Once started on those Cambrian solitudes, they would probably thrive admirably, and kid would soon be quoted in the London markets at next to nothing a pound, and yet be remunerative to the producer.'

The many railway-stations which dot our numerous country-lines would be admirable spots for goat-culture, as there is always enough land between the

stations, especially embankments, to feed hundreds of goats, and the porters and other persons employed on the line could easily obtain permission to feed their goats on this ground, and so add considerably to their incomes. The use of this ground, moreover, would afford an additional guarantee for good conduct.

Sometimes a goat is to be found attached to stables, the men having an idea that its very powerful odour is agreeable to horses. It has, however, another use, being thought to be the only animal which will face fire, and therefore being employed to act as a guide to the horses, should fire break out in the stables.

In some parts of America it is the custom to keep a few goats with each flock of sheep as a protection against strange dogs. No sooner does the dog make his appearance than the goats attack it, butt it about from one to the other, and speedily drive it away, limping and yelling with pain and terror. Two goats are quite sufficient for each flock of sheep. Before the introduction of goats, the sheep were helpless when attacked, and only ran round and round, crying piteously. Now, as soon as a dog approaches, they simply form in line behind the goats, and rather seem to enjoy the discomfiture of their foe. In the Far West, goats are penned with the sheep in order to drive away wolves. I wonder whether the goat would be equally useful in Scotland, where sheep-killing dogs are standing plagues to the owners.



GOATS PROTECTING SHEEP.

Even the female goat is a sufficiently formidable antagonist when she has cause for fighting, as is seen by a battle witnessed by a correspondent of the *Field*:

‘I once witnessed a singular act of maternal courage and devotion on the part of a nanny goat. It was in the early dawn of a summer morning, on



my way from the homestead to a distant out-station (in the Cape Colony). About six hundred yards to the right of me, I noticed a strange conflict between this goat and a jackal. “A most unequal contest, surely!” the reader will exclaim. With her hind-quarters pressed closely against a clump of bushes, and her little one between her front legs, there she stood defiantly.

‘The jackal appeared to be exercising all his craft to possess himself of the coveted titbit. He would crawl, feint, dodge, trot round the bush, now on one side, now on the other, and make sudden and unexpected rushes ; but the faithful mother, with all her maternal instincts roused, and her horns well lowered, was always prepared to receive him on their sharp points. When this contest had continued for quite half an hour, and fearing a disastrous ending to the incident, I gave a shrill whistle, which so alarmed the crafty foe that he trotted off, apparently much chagrined at the loss of his breakfast.’

The jackal in question was the black-backed species, an animal well known for its cunning and audacity, so that to baffle it for so long a time shows no small courage and agility on the part of the goat, together with an instinctive knowledge of the best tactics.

Those who wish to obtain full instructions on the art of goat-keeping for profit can do so by consulting the ‘Book of the Goat,’ by the Hon. Sec. of the British Goat Society, Mr. H. S. Holmes Pegler. The same gentleman has contributed a summary of the instructions to the *Boys’ Own Paper* for July, 1887.

He does not so much recommend the rearing of kids in this country, as keeping the female goat for the sake of her milk. The milk can always command a sale, even if it be not used for home purposes, while the price which would be obtained for a kid

would not be equal to that of the milk which it consumes. Should, however, the flesh of the kid become a regular portion of the butcher's stock, the kid would fetch as high a price as lamb, and be equally worth rearing.

Practical directions are given for making the very simple edifice which will serve as a shelter for this very hardy animal, and the directions for milking are plain and intelligible. Especially ingenious is the milking-bench, which can also be utilized as a feeding stall. It looks very much like a guillotine, the goat standing on the bench, and her head passing through an oval hole in the upright plank, like the 'lunette' of the guillotine. The feeding-vessel being placed exactly below the spot occupied by the animal's head, she is always willing to jump on the bench at milking time, and allow the lunette to be lowered over her neck, so as to keep her motionless without hurting her. The bench, moreover, has the advantage of raising the animal to a convenient height for the milker.

As to the amount of milk, it varies as much in goats as in cows. Mr. Pegler says that the best milkers produce about two quarts daily, and he has known goats which produced as much as three quarts. Three pints daily, however, is considered as a good yield. As to the quality of the milk, Mr. Pegler is quite enthusiastic.

' For delicate children, who have to be reared by hand, this milk is invaluable, so much so, that I have

known numerous instances where, on the doctor's recommendation, it has been procured and paid for at the rate of two shillings and even half a crown a quart.' Such instances are, of course, exceptional, and these prices could not be obtained if the use of the milk became general. Still, it can be sold at the usual price, which is amply remunerative, and if it be used at home, there can be no doubt that it is genuine. His summary of the milk is as follows :

' Goats' milk is the most digestible of all milks, except that of the ass, and the most nourishing of any. It neither tastes nor smells different from cows' milk, unless it be drawn or allowed to stand in vessels that have not been properly cleaned after having been used previously for the same purpose. Hence it is important that the milking-bowl and the strainer be thoroughly scalded out each time, and exposed to the air. No one who has once used goats' milk for domestic purposes will ever care to return to cows' milk. It gives tea or coffee the rich delicious flavour of cream, while in puddings and in cake it leads one to suppose that an unusual number of eggs have been used.

' Taken fresh from the goat, this richness is not so apparent, and any person ignorant of the facts would suppose that he was drinking cows' milk. When I have met with people who, with the foolish prejudice that is so common, have declined to taste it, I have generally managed that they should drink it in their tea or coffee, without knowing that it was not cows'

milk ; and their remark, if any, has nearly always been, " What rich milk you get here !" And when I have induced friends to taste a glass of cows' milk and one of goats' milk, in order to detect, as they always boast they can, the one from the other, it has nearly always resulted in their coming to a wrong decision.'

Mr. Pegler insists strongly on one precaution which must be taken when supplying a goat with food, as must occasionally be done. The goat, though it can eat almost anything, as Mr. Pegler says, 'from a piece of bread to a small newspaper, and then to a pouchful of tobacco,' will touch nothing that is not scrupulously clean, and will even reject a cabbage-leaf or potato-paring if another goat should happen to have bitten it. Variety of food is, however, essential to the health of a goat, and the animal will consume most of the kitchen scraps which usually are thrown into the dust-bin. It is remarkable, by the way, that although the goat can consume tobacco with impunity, the leaves of the yew or rhododendron are poisonous to it.

Mr. Pegler recommends that a large lump of rock-salt should be placed in some spot where the goat can have constant access to it, salt being exceedingly beneficial to these animals.

Although in this country the hair of home-bred goats is practically unused, that of certain foreign

goats is held in the highest estimation, but only in a manufactured state.

For example, the justly celebrated 'Turkey' carpets are made from the hair of the goat, and are manufactured in most parts of Asia Minor. They are entirely made by hand, not even the rude local loom being employed, and are laboriously built up, tuft by tuft. The pattern therefore passes through the entire fabric, and if the surface be soiled, it can be restored by merely clipping it.

These carpets are necessarily expensive, as the material is in itself costly, and the time spent upon them, even of an Oriental, must be paid for. But, expensive though they may be, they are well worth buying, for, having no threads, they can never be threadbare, and it is almost impossible to wear them out. Not only are they durable, but they are exquisitely beautiful, the patterns having a 'repose' which is delightful to the eye, and contrasts sadly with the glaring, hard patterns and 'loud' colours of the average British carpet.

Valuable as these carpets are, they are by no means the best that are made, as is well shown by an article which appeared in 'Wool and Textile Fabrics.'

'The most rare and the most appreciated are the carpets which the Persians use in their prayers, and which are distinguished by an Oriental design, the harmonious disposition of the colours, and the fineness of the wool employed. They are the most

ancient objects of luxury and ornament of the extreme East, and one may sometimes be seen, which dates back for more than a century, and which is transmitted from father to son, until it finally falls into the hands of rich merchants.

'The principal centres of production of these carpets are in the province of Kermania, or of Trek-Adjemi, where numerous workmen are employed in their manufacture. The choicest are made in Kermania and Paraghault, woven exclusively with goats' hair of Kermania, Khorassan, and Kurdistan, the fineness and brightness of which is attributed to the particular manner of raising the flocks. The fleeces of these goats are of varied tints, which permits great varieties of design to be made from them. For dyeing them they employ the Indian and Persian colours, obtained from certain plants, roots, and leaves of trees submitted to fermentation.

'The colours most extensively used are blue, orange, yellow, grenat, and green. To test the quality of a carpet, the Easterns touch it with a burning coal. If the burn leaves no trace, the carpet is good, but if it retains any mark at all, it loses three-quarters of its value. They employ no machinery whatever, nor any kind of loom; the carpets are made entirely by hand, and the work requires great care and patience. The process of manufacture employed in Persia has been introduced into India with success, where the production has been rapidly developed, especially at Cahors and Mirzapore.'

Equal in value to these precious carpets, if not superior to them, are the celebrated Cashmere shawls, which are sufficiently costly to be given as royal presents. Though made in the country whence they derive their name, the hair from which they are woven is procured from a special breed of goats inhabiting the more northern regions of Thibet.

As is the case with the fur of many animals, such, for example, as the seal and the beaver, the hair of the Cashmere goat is of two distinct qualities. There is an outer coating of long and rather coarse hairs, which acts as needful defence against the climate. Below this outer coat is an inner wool, given to the animal for the sake of warmth, and this inner coat furnishes the material which is used in the manufacture of the Cashmere shawls. Being so fine, the wool of many goats is required to make a single shawl, the smallest size requiring the produce of ten goats.

Attempts have been made to acclimatize the Cashmere goat as well as that of Asia Minor in this country, but hitherto without success.

CHAPTER XIX.

THE OSTRICH AND THE FARM.

The ostrich and freedom—The Bosjesman and the English Court—Why the Bosjesman needs the ostrich—Eggs of the ostrich—Modes of cooking them—Uses of the shells—Water-vessels—Nests of the ostrich—How the Bosjesman kills the ostrich—Preparing a disguise—Sham ostriches—Death of the deluded birds—The roc's egg—Plumage of the ostrich—Its use to man—The 'Field of the Cloth of Gold'—The feather-supply—Ostrich-hunting—A foolish bird—Speed of the ostrich—Length of its stride—Difficulty in finding the track—Failure of the feather-supply—Domesticating the ostrich—Ostrich-farms—Mr. Hutchison's account—Voracity of the bird—Its food—The kick of the ostrich—Horse killed by ostrich—A feathered 'Marchioness'—Clipping the ostrich—'Challenge' of the male—Average value of the feathers—Ostrich eggs artificially hatched—Management of the 'incubator'—Acclimatization of the ostrich—An ostrich race in India.

If we had been asked to select from among the feathered race one bird which could not be brought under the dominion of man, there would, until quite recent years, have been little doubt as to the answer. The bird would have been the ostrich, the inhabitant of the desert, the wary, the swift-footed.

'What time she lifteth up herself on high, she scorneth the horse and his rider' (Job xxxix. 18).

Yet man needs the ostrich, and from time immemorial has, more or less, subjected it to his dominion. It is a remarkable fact that the bird is needed by man at the opposite poles of development. The Bosjesman of South Africa, a typical savage, could hardly support existence without the bird ; while no lady is allowed to be present at the British Court unless her head be decorated with three snowy ostrich feathers, and the same three feathers have for five centuries been the cognisance of the Prince of Wales.

First, we will see why the ostrich is necessary to the Bosjesman. For its plumes he cares little, but its flesh furnishes him with many a meal, and so do its eggs, which can satisfy the almost insatiable appetite of a Bosjesman. A large egg will furnish a good meal to ten ordinary Englishmen, while even the fierce hunger of five hunters cannot effect the consumption of more than a single egg.

The best mode of cooking these eggs is that which is followed by the natives. A round hole is made at one end of the egg, which is then placed upright in the embers, with the hole uppermost. A twig is then cut, having a number of smaller twigs radiating from one end in a sort of brush. These subsidiary twigs are cut to a uniform length of two or three inches, the principal twig, or stem, being about eighteen inches long. The brush is then squeezed into the egg, and the upright stem taken between the palms of the hands. It is then rotated

rapidly between the hands, salt and pepper being added to taste, until the whole of the contents are converted into an omelette.

Anything which can be eaten is valuable to the Bosjesman, as it is to any other savage, but the egg of the ostrich has a further use after it has been emptied of its contents. It forms an admirable water-vessel, and is largely used for that purpose. Even at the regular wells, if the natural water-pools can be called by such a name, the supply of water often fails in an exceptionally dry season, and nothing but mud is left in them. As long, however, as there is mud, water can be obtained from them, the task being deputed to the women.

Each woman takes with her two hollow reeds and a number of ostrich egg-shells tied up in a net. She then ties round the end of one of the reeds a bunch of dry grass, so as to form a simple filter. She next plunges the end of the filter-reed into the mud, and sucks the water into her mouth. By means of the second reed she then discharges the water into the egg-shells, carefully plugging the opening as each is filled.

Even the white hunters make much use of the ostrich egg-shells as convenient water-vessels. The fashionable way of carrying them is to take off the trousers, tie up the ankles, fill them with the shells, and then set them on the horse in the position which they would have assumed had the limbs of the owner been occupying them. Should the hunter

be on foot, he sets them on his shoulders in like fashion.

The Bosjesman sometimes makes a terrible use of these water-shells. Having discovered a herd of oxen which is carelessly watched, he marks out a track across the desert, taking especial care to keep as far as possible from water. Along this track he buries, in certain spots only known to himself, stores of water enclosed in ostrich-shells. When all is prepared, he makes his raid, and drives off as many oxen as he can manage, retreating along the prepared track. The concealed water-stores serve for himself and the cattle, while the owners of the stolen property cannot pursue the robbers without laying in a store of water, and so losing valuable time.

The method by which the Bosjesman secures the ostrich, and thus exercises his dominion over the swift and wary bird, is marvellously ingenious.

The ostrich is in the habit of making joint nests, several females depositing their eggs in close proximity to each other. During the night the birds sit on the eggs, but, in the daytime, they merely bury the eggs a foot or so in sand, and then go off in search of food, the heat of the sunbeams sufficing to carry on the process of hatching.

When a young Bosjesman is fortunate enough to find a nest, he does not rifle it, as he wants to procure the means of ostrich-hunting. He therefore buries himself in the sand, armed with his tiny bow and poisoned arrows, and awaits the coming of the parent birds.

As soon as the male is within range, the little hunter wounds it with an arrow, and quietly waits until it dies from the effects of the poison. He then cuts off the neck where it joins the body, removes the legs, takes off the skin, and dries it upon a light framework to which are attached a couple of thongs. The neck is then skinned, and a stick wrapped with dry grass pushed into it, a foot or so protruding by way of a handle. The Bosjesman's equipage is then complete, and he can start on a hunting expedition as soon as ostriches are seen.

These birds generally live in little bands of five or six in number, and an expert hunter has been known to secure almost every bird. Tying the skin on his back, he grasps the handle of the neck, and manipulates it in such a way that it looks as if it belonged to the body. Imitating the movements of an ostrich, he gradually approaches the birds, taking care not to advance directly towards them, and especially to keep to leeward of them, as, if he went to windward, they would be sure to detect him by the sense of smell.

I have often seen Bosjesmans go through this performance, and have been greatly struck with its absolute fidelity to nature. Though I saw the Bosjesman tie the ostrich-skin on his back, take the stuffed neck in his hands, and was only at a distance of a few yards, I could hardly realize the fact that the living bird was not before me. Sometimes the sham bird would lower its head to the ground as if

feeding. Then it would raise its head high, and seem to be looking round as if suspecting danger. Then, as though satisfied, it would squat down, and stretch its neck along the ground as if reposing. I do not wonder that the ostriches are deceived.

When the hunter has approached near enough, he pushes the neck-handle into his belt, so as to keep it in position, fits an arrow slowly and cautiously to his bow, and lets it fly at the nearest bird. The wounded ostrich naturally starts off to run, accompanied by its friends, and followed by the Bosjesman. Presently the wounded bird falls, when its companions gather round it, urged by curiosity. Up comes the Bosjesman, wounds another bird, and continues to repeat the trick until he is either detected, or has killed all the birds.

Ostrich egg-shells are in much demand in the East, being formed into drinking-cups, ladles, boxes, and other useful and ornamental objects. They are decorated with silken tassels, and hung in the mosques as ornaments. This custom explains the mysterious offence given by Aladdin to the Genie of the Lamp, when, by the evil advice of the sorcerer, he asked the genie to hang a roc's egg in his palace.

These eggs also serve another ingeniously useful purpose. When buildings, especially the Coptic churches, are lighted by oil-lamps suspended from the ceiling, rats generally manage to get at the oil by clambering on the beams to which the lamps are hung, and then letting themselves down the cords.

They were, however, circumvented by the device of passing the cords through a hole at each end of an ostrich egg. The rats can descend as far as the egg, but no farther, the smooth surface affording no hold for their claws.

Pass we now to the feathers, especially the beautiful white plumes of the wings and tail.

The ostrich not being a flying-bird, the feathers do not possess the tiny hooklets by which the vanes of flying-birds' plumage are enabled to hold the air, and are loose and downy throughout their whole length.

From time immemorial these beautiful plumes have been accessories of regal state. We see them repeatedly depicted on the monuments of ancient Egypt as made into great fans, or rather, umbrellas, which were held over the head of Pharaoh as marks of regal rank. The feather-umbrella, which has already been mentioned as denoting the rank of an Ethiopian princess, is apparently constructed from the plumes of the ostrich.

A notable example of the use of ostrich-plumes as appendages to royalty is to be seen in the celebrated bas-relief representing the meeting of Henry VIII. and Francis I. at the Field of the Cloth of Gold. All the principal nobles, whether English or French, wear preposterously large wide-brimmed hats, some of them being slung on the back like targets until their

wearers come within view of the royal personages. All these hats are profusely bedecked with enormous ostrich plumes which almost conceal every portion of the fabric ; while as to those which are worn by the two monarchs, the spectator wonders how the wearers could have retained them on their heads.

Putting aside the use which is still made of them in the East, the demand for them in the Western world is so great that the supply, not many years ago, ran a great risk of failing altogether. The Bosjesmans could furnish comparatively few feathers, and those seldom of good quality, while the native hunters are apt to keep their spoil for themselves.

Moreover, there are not many who possess the horses and dogs which are needed for the chase of the bird, who, in good truth, scorneth the horse and his rider, no horse being able to overtake the ostrich in fair chase. Stratagem is therefore employed.

The ostrich, when pursued, never runs in a straight line, but takes a circular course; almost invariably to windward. It is so obstinately attached to this course, that if its line when once taken can be ambushed, it will pass close to the enemy, even after it has seen them, and will even come within reach of a spear.

In the desert a number of hunters band together, in order to kill the ostrich. The horses have been regularly trained for a considerable time, and are not used until they can endure long and severe fatigue. When the birds are seen, the hunters divide them-

selves into two sets, one being intended merely to keep the ostriches on the run, and the other set, which is composed of the strongest and swiftest horses, to run the birds down. When the ostriches have fairly started, and have gone far enough for their course to be determined, the second set of hunters start off at right angles, cantering gently to the spot near which the curved course is likely to pass. Sometimes they may have to wait for several hours, if the circle should happen to be a large one. Then, as the ostriches draw near, tired with their long run, the hunters mount their fresh animals and give chase. Even with these precautions, the chase is still a severe one, and, as Canon Tristram remarks, is seldom completed without a horse or two falling exhausted. The same writer, who had enjoyed repeated opportunities of seeing the bird in its native deserts, gives the following summary of its running powers :

‘ Its speed has been calculated at twenty-six miles an hour by Dr. Livingstone, and yet the South African ostrich is smaller than the northern species ; and I have myself, in the Sahara, measured its stride, when bounding at full speed, at from twenty-two to twenty-eight feet. If Dr. Livingstone’s calculation be at all correct, the speed of the ostrich is unequalled by that of any other cursorial animal.’

Some idea of the pace of the ostrich may be

obtained by measuring the distance between its footsteps when at full speed. This is not so easy a task as it seems at first sight, the track of the bird being of the slightest character, even on sand, and difficult of detection. As

‘When swift Camilla scours the plain,
Flies o’er the unbending corn, and skims along the main,’

so does the ostrich skim over the desert, leaving but slight indications on the sand that so large a creature has passed. It only has two toes, and only the tips of these toes rest on the ground when the bird is at full speed. The distance between them is so great that the eye can scarcely see two of them from one spot.

Lately the supply of feathers became menaced from a different quarter. The extensive demand was causing such a destruction among the birds, that the ostrich might follow in the footsteps of the dodo and great auk (the latter a bird quite as wild, swift, and wary in water as the ostrich on land) and in a short time become extinct.

A remedy soon suggested itself, and within the last few years the audacious project was carried out of adding the ostrich to our list of domesticated animals, and bringing it completely under the dominion of man.

Could this be done, the ostrich need not be killed, but a fresh crop of feathers might be obtained annually from each bird, as has been done for many

years with the goose. Moreover, as the birds would probably lay more eggs than would be required for keeping up their numbers, the superfluous eggs might also be turned to profit. The experiment was tried, and now ostrich-farming is a recognised branch of industry. Here, as in other instances, we find that the ancient Egyptians have been our predecessors.

On the monuments there are representations of ostriches which are under the dominion of man, and which, as we shall see presently, are being handled in a manner which shows a thorough acquaintance with the character of the bird. I have before me a large mass of statistics upon the management and profit of ostrich-farming, of which the following account is an abstract.

When once the birds are placed in the enclosure, there is no difficulty in keeping them within it. Although it can run with such speed, make such long strides, and strike so fiercely with its feet, the ostrich cannot step over a fence of a yard in height. The fences are therefore made so low that at a little distance the birds look as if they were at liberty. Mr. A. C. Hutchison, who has for some time managed Mr. Becker's great ostrich-farm at Echo Vale, writes to a correspondent as follows :

‘The farm is situated on the bank of the river Nahoon, and contains over a thousand acres. We have three pairs of breeding birds, valued at two

hundred pounds each, and they are camped out in paddocks, each containing an acre or so of ground. These birds are very dangerous, especially the cock ; and when they are breeding, I require a strong pronged stick to keep him off me, as a kick from his heavy legs would prove fatal.

‘ We feed them every morning with Indian corn (mealies), barley, chopped cabbage, lucerne, and other green food, with a plentiful supply of indigestible food, such as bones, gravel, old nails, etc. Being kept in the camp, it is remarkable what these birds will swallow. They are very fond of buttons, and not one do they leave upon my working coat. Just the other day, one of the birds swallowed my pipe. Ostriches here, as of old, are as stupid as ever, so that it is easy to force them in. Any that do get away are difficult to capture, as no horse can outrun them.’

I must here interrupt Mr. Hutchison’s remarks by explaining the allusions to ‘ forcing the birds in ’ and the danger of the kick.

The kick is a most extraordinary and complicated performance. It is not delivered backwards, like that of the horse, but the leg is thrown forwards and outwards, until the foot is high in the air. It is then brought down like the blow of a flail, the object being to strike the foe with the formidable claw, and rip it open.

Mostly, however, the blow is struck with the flat

of the foot, and even then can inflict a serious injury. Instances are known where attendants on the birds have been killed outright by a single blow, and in one farm near Graff Reinet, the back of a horse was broken by the kick of an ostrich. The bird had struck at the rider, had missed him, and the blow had fallen on the back of the unfortunate horse.

I have seen the ostrich deliver this kick at a companion in captivity. The bird had a remarkable spite against its companion, and just as Miss Brass could never be within reach of the 'Marchioness' without pinching or slapping her, so this ostrich would not allow its companion to pass it without aiming a kick at it.

When, therefore, birds are to be clipped, they are driven into a small enclosure where they are pressed together, and have no room to kick. The clipper then furnishes himself with a small and very sharp knife, forces himself among the birds, and cuts off the plumes without causing any pain to the ostrich. Should a bird resist, it is at once brought under subjection by grasping it by the neck.

In the Egyptian painting to which I have already drawn attention, the attendants on the bird are evidently acquainted with the best way of handling the ostrich, its actual keeper holding it by the neck, and marching just behind the bird, so as to be out of reach of its kick.

A writer in the *Century* gives a most graphic

and amusing account of the behaviour of a vicious male ostrich :

‘ He exalts his head and body, and, coming towards the stranger with a stately and very deliberate stride, begins to hiss loudly like a goose or serpent, at the same time erecting all his feathers, and spreading his wings until he becomes twice his usual size.

‘ When perhaps twenty yards off, he drops suddenly on his knees, appearing, as it were, in a sitting posture. Curving his neck haughtily back over his body, he swings it swaggeringly from side to side, at each motion knocking his head violently against his body.

‘ In this performance he partly fills his throat with air, so that every thud is accompanied by a peculiar gurgling sound ; and while keeping time to these movements, his great wings swing alternately backwards and forwards in a boastful manner.

‘ This is called the “challenge.” It is well named, for there is a bragging, “tread-on-the-tail-of-me-coat” air about it that would be irresistibly laughable if only it could be seen from the safe side of a tall fence, instead of over the low barrier of dried bushes of which most camps are composed.

‘ After continuing the challenge from five minutes to a quarter of an hour, the bird leaps up and comes towards you with a jaunty bound, but after a few steps drops down again to repeat the challenge.

Thus reaching the fence, he paces up and down angrily in his eagerness to get out, or hisses and dances in rage before you, with wings elevated like two enormous fans. He is ever threatening to leap the fence, but, happily for the nervous visitor, he never does it.'

The value of the feathers is still so great as to make an ostrich-farm, if properly conducted, a profitable speculation. Mr. Hutchison states that in 1881 he procured twenty pounds' worth of feathers from a single bird at one clipping. He thinks that the average value of the clipping of a single bird is from twelve to fifteen pounds. The birds are clipped at intervals of six months.

How completely the ostrich is brought under the dominion of man is shown by the fact that the birds are now no more allowed to hatch their own eggs, the artificial 'incubator' being used for the purpose. That which is employed by Mr. Hutchison is warmed by means of a paraffin lamp and water, the latter being heated to one hundred and four degrees (Fahrenheit). The eggs rest on sawdust or bran, and each incubator has space for forty eggs.

From thirty-six to forty-two days are occupied in hatching, and the greatest care is taken of the eggs during the process. At noon, each egg is partially turned, and every morning and evening the eggs are withdrawn from the machine for fifteen minutes, and turned over before they are replaced.

‘Great care has to be taken after the thirtieth day, as some birds are weak and cannot break through the shell, so that they have to be taken out. After the birds come out, they are put into little boxes on the tank of the incubator. The third day they begin to pick up gravel, and on the fourth day they will take chopped cabbage, mangold and turnip-tops. Until over a month old, they are put into the incubator every evening. They suffer greatly from cold weather, and the utmost care must be taken in keeping them warm with blankets. After they are two months old, they can walk and run with the herd-boy all over the farm. Chicks from four to six months old are valued at ten pounds each.’

Not only does man exercise his dominion over the ostrich in its own country, but he transports the bird into other lands, and acclimatises it. Ostrich farms are now in existence in India, South Australia, the River Plate district, and New Zealand. The birds thrive well in all these places, especially in New Zealand.

Lady Burton, in her ‘Arabia, Egypt, and India,’ mentions a remarkable instance in which the dominion of man has been exercised over the ostrich. The scene is laid in India.

‘At last we saw something very unique and bizarre—an ostrich race. The man mounts, sits back, puts his legs under the wings, and locks his feet under the breast. The birds go an awful pace, and kick like a horse.’

CHAPTER XX.

MAN AND THE DEER.

Range of the deer tribe—The fallow deer—The red deer—The stag in harness—A strange ‘four-in-hand’—A unique chase and its termination—The moose in harness—Audubon and the moose—The wapiti and the sambur—The reindeer and its habitat—Its flesh—‘Pemmican’—The Laplander and the reindeer—Lord Dufferin’s account—A Lapp love-ditty—Capabilities of the reindeer—Migration and its results—The laws of Norway and Sweden—A new use for the reindeer—Singular buoyancy of its hair—Life-saving furniture and clothes.

THOUGH the deer tribe is spread over the great continents of Europe, Asia, Africa and America, and in consequence brought in contact with several races of mankind, there is only one member of the tribe which has really been brought under the dominion of man.

It is true that the fallow deer (*Dama vulgaris*) has become sufficiently domesticated to form an ornamental appendage to our parks, and to supply those who like it with venison. But there its education has stopped, and the fallow deer is not even capable of supplying us with milk, and still less of doing any sort of work for us.

It is also true that the red deer (*Cervus elephas*) has occasionally been trained to harness. There is one now in Sanger's menagerie at Margate which is docile enough to work in harness, and which will allow itself to be caressed as if it were a pony instead of a deer.

When the present century was young, an enterprising nobleman succeeded in training four stags to draw in harness, and was fond of driving them in his chariot to various sporting localities. One of these favoured spots was Newmarket, where he was accustomed to put up his strange team at a certain hotel. An unlucky incident, however, put an end to this interesting experiment upon the docility of the stag.

On one occasion, the chariot had neared Newmarket, when a pack of hounds came across the road which had been just traversed by the stags. The hounds at once set off in pursuit, and the stags, hearing the pack in full cry, broke from the control of the driver, and ran away at their best speed. A couple of mounted grooms who knew the stags and always accompanied the team were powerless to control the terrified animals, whose fate seemed sealed.

Fortunately the stags instinctively directed their course towards their accustomed resting-place, and allowed themselves to be guided into the inn yard. There, the whole staff of ostlers, grooms and stablemen gained sufficient control over the stags to force them and the chariot into an empty barn, and bar

the doors. This was scarcely done before the hounds swept into the inn yard, and were happily disappointed of their prey.

What had happened once might happen again, and consequently the horned team were never again taken on the road.

Even the gigantic moose or elk (*Alces malchis*), has occasionally been taught to work in harness, and, in consequence of its size and strength, has proved to be a very useful servant. For this purpose, the moose must be taken when very young, as it is almost untamable when it has passed out of childhood.

Audubon mentions an instance where a young moose, about a year old, had been captured. It was so completely worn out by its struggles for freedom that it allowed itself to be placed for the night in a hut. 'But in the middle of the night we were awakened by a great noise in the hovel, and found that as it had in some measure recovered from its terror and state of exhaustion, it began to think of getting home, and was much enraged by finding itself so securely imprisoned. We were unable to do anything with it, for if we merely approached our hand to the openings of the hut, it would spring at us with the greatest fury, roaring and erecting its mane in a manner that convinced us of the futility of all attempts to save it alive. We threw to it the skin of a deer, which it tore to pieces in a moment. This individual was about six feet in height.'

Although it is extremely docile when taken very young, becoming attached to its keeper after a few hours, there is at present but little scope for its services, and man can only use it as a beast of chase. The flesh is excellent, and is mostly preserved like hams, but the huge muzzle is considered as so great a delicacy that enthusiastic hunters say that it is worth while to visit northern Europe and go through all the hardships of a moose-hunt merely for the sake of eating this morsel. I rather imagine that the appetite induced by the hunt, which often lasts for several days, has something to do with the flavour of the vaunted delicacy.

I may mention, by the way, that the name of elk is loosely given to several of the deer tribe, the wapiti of North America, which is almost identical with our stag, being invariably called the 'elk' by hunters. The sambur deer of India is also called by the same accommodating title, much to the confusion of readers.

The only member of the deer tribe which has been permanently brought under the dominion of man is the celebrated Reindeer (*Tarandus rangifer*), an animal on which an entire nation is almost wholly dependent.

It inhabits the northern parts of Europe, Asia and America, being in the last mentioned country known by the name of caribou. Although no

specific difference can be found between the caribou and the European reindeer, the former animal has never been brought under human subjection, and is only used as a beast of chase.

Its chief value lies in the skin and the flesh. The latter is, however, seldom used in ordinary cookery, but is dried, pounded, and then mixed with the 'depouille,' or fat which lies under the skin of the back and croup. In this state it is called 'pemmican,' and is the very staff of life to the hunter, as a large amount of nutriment can be compressed into a very small space, and it can be kept for an almost unlimited time. The marrow of the leg-bones is mostly mixed with it. The flesh and fat of the bison are, or rather were, employed for the same purpose, but 'buffalo-pemmican,' as it was termed, was thought to be much inferior to that which is furnished by the reindeer.

In most cases, when any animal is completely domesticated, it is unknown in its wild condition, except when, as is the case with the horse, it is descended from ancestors who have escaped from their human masters. But in Northern Europe the wild and domesticated reindeer are, so to speak, side by side, the latter retaining, as we shall presently see, many of the habits of the former.

The very remarkable nation who are popularly known as the Lapps have contrived to take possession of the reindeer, which is as valuable to them as the dog to the Eskimo. It forms their chief means

of transport, especially when they wish to convey their goods from one place to another, as is constantly required in the semi-nomad life which they are forced to lead. A most admirable summary of the relative positions of the Lapps and the reindeer is given by Lord Dufferin in his 'Letters from High Latitudes.'

'Although the forests, the rivers, and the sea supply them in a great measure with their food, it is upon the reindeer that the Laplander is dependent for every other comfort in life. The reindeer is his estate, his horse, his cow, his companion and friend. He has twenty-two different names for him. His coat, trousers, and shoes are made of reindeer's skin, stitched with thread manufactured from the nerves and sinews of the reindeer. Reindeer milk is the most important item in his diet. Out of reindeer horns are made almost all the utensils used in his domestic economy, and it is the reindeer that carries his baggage and drags his sledge.

'But the beauty of this animal is by no means on a par with his various moral and physical endowments. His antlers, indeed, are magnificent, branching back to the length of three or four feet; but his body is poor, and his limbs thick and ungainly; neither is his pace quite so rapid as is generally supposed. The Laplanders count distances by the number of horizons they have traversed; and if a reindeer changes the horizon three times during the

twenty-four hours, it is thought a good day's work. Moreover, so just an appreciation has the creature of what is due to his own great merit, that if his owner seeks to tax him beyond his strength, he not only becomes restive, but sometimes actually turns upon the inconsiderate Jehu who has overdriven him. When, therefore, a Lapp is in a great hurry, instead of taking to his sledge, he puts on a pair of skates exactly twice as long as his own body, and so flies on the wings of the wind.

'Every Laplander, however poor, has his dozen or two dozen deer, and the flocks of a Lapp Croesus amount sometimes to two thousand head. As soon as a young lady is born—after having been duly rolled in the snow—she is dowered by her father with a certain number of deer, which are immediately branded with her initials and thenceforth kept apart as her especial property. In proportion as they increase and multiply does her chance improve of making a good match. . . .'

After describing the quaint ceremonies of a Lapp betrothal, in which the presentation of a reindeer's tongue by the bridegroom, and its acceptance by the bride, is the culminating point, the author proceeds as follows :

'I cannot better conclude this summary of what I have been able to learn about the honest Lapps than by sending you the tourist's stock specimen of a

Lapp love-ditty. The author is supposed to be hastening in his sledge towards the home of his adored one—

‘ Hasten, Kulnasatz, my little reindeer, long is the way, and boundless are the marshes ;
Swift are we, and light of foot, and soon we shall have come to whither we are speeding ;
There shall I behold my fair one pacing. Kulnasatz, my reindeer, look forth, look around.
Dost thou not see her somewhere—bathing ?’

The reader will probably have noted the resemblance between the Kafir mode of dealing with the cow and the dependence of the Lapp upon the reindeer. The latter, however, needs the reindeer even more than the Kafir needs the cow. The latter does not employ the cow as a beast of traction, whereas the reindeer forms with the Lapp the only means by which goods can be conveyed.

We have already seen that it is not a swift animal in harness. Neither is it very strong. A law therefore is in force that the reindeer shall not be allowed to draw more than one hundred and ninety pounds, or to carry more than one hundred and thirty. If Lapps were as largely proportioned as the average Englishman, such a regulation could not be carried out. But they are a tiny race, a Lapp man being about equal in size and weight to an English boy of eleven or twelve.

I have mentioned that the tame reindeer retain some of the habits of their wild ancestors. One of

these habits is the annual migration to and from the hills. The reindeer insist on going, and their owners are forced either to accompany them or lose their only property. Here we come upon another remarkable influence which the domesticated animal exerts upon its owner. Whether he wishes it or not, the Lapp is forced to be a nomad, and in consequence his progress in civilization is seriously hindered. Moreover, his sense of justice, and of the boundaries between right and wrong, is greatly blunted, and the periodical migration has become such a nuisance in Norway and Sweden, that special laws have been lately passed in order to lessen it as far as possible. In justice to the Lapps, I must say that they, like other Turanian tribes, were the aboriginal inhabitants of the land, and, like the red men of North America, have been gradually crowded out by the more powerful races which have taken possession of their territory.

During their migrations, the reindeer are obliged to forage for themselves, and their masters, who have but slight respect for the distinction between *meum* and *tuum*, allow their animals to trespass upon cultivated grounds, and to devour the crops, trample down the underwood, and inflict serious damage on the cultivator. When it is remembered that at Tromsoe alone upwards of a hundred thousand reindeer annually assemble, having travelled from Sweden, the amount of the aggregate damage which is done by the migration can be easily imagined.

It is almost impossible to arrest the owners of the

trespassers, as none but the Lapps know who they are, and no Lapp will inform against another. Moreover, one Lapp looks so exactly like all the other Lapps, that identification is out of the question. Even were the owner discovered, it is almost impossible to arrest him, as he has only to mix with his countrymen and escape into Sweden if the arrest be attempted in Norway, and *vice versa*.

The Parliaments of the two countries have therefore passed a joint law which may have the effect of checking the evil. The whole of the grazing grounds of the two countries have been divided into districts, each of which is placed under official superintendence. If damage be committed in any district, the owner of the trespassing animal must be within it, and the task of identifying him is comparatively easy. If no information can be obtained, the whole of the families of that district are obliged to pay the damage among them, each being fined in proportion to the number of deer which it owns.

So here we have the remarkable fact that a single habit of a single animal has enforced special legislation on two important European kingdoms.

Few educated persons are unaware of the sudden leap into importance of the alpaca since the late Sir Titus Salt's discovery of the value of its wool. A similar discovery has since been made of the reindeer's hair.

Herr W. C. Möller, of Drammen, a Norwegian engineer, being struck with the buoyant properties of the reindeer's hair, has caused it to be formed into a number of articles which might be useful at sea, or even on the river, which at the same time would act as life-preservers in case of shipwreck or other accident.

Life-belts, for example, were made of this hair, and were found to be much lighter than those made of cork. Couches, sofas and mattresses are almost equivalent to small boats, a single mattress, which was calculated as able to support two men, being found capable of sustaining three. An ordinary jacket, looking like any other jacket, was as effective as any life-belt in the water, while it formed a warm and serviceable article of clothing on board. A common door-mat sustained a man though he was wearing a suit of clothes saturated with water, and when a complete suit of reindeer hair was worn, the wearer could lie on the surface of the water without moving, while he found it impossible to dive.

Should this invention be carried out, the reindeer may become almost as important to the inhabitants of the South as it now is to the nomad nations of the North. Even the caribou may be brought under the dominion of man, and bred for the sake of its hair, just as the ostrich is bred for the sake of its plumage.

CHAPTER XXI.

THE CONQUEST OF THE ELEPHANT—CAPTURE.

Natural existence of the elephant—Asiatic and African elephants—Elephant herds and their composition—Nomad habits of the animal—‘Rogue’ elephants and their dangerous character—Strength, intelligence, and the ‘trunk’—Capture of the elephant—The ‘keddah,’ ‘koomkie,’ and pitfall—Construction of the keddah—How the animals are enticed into it—Terror of the captives—Securing the prisoners—Taming by hunger—An elephant’s remonstrance—Capture by koomkies—Jung Bahadur as an elephant-hunter—Elephantine sirens—The story of Lutchmee—The pitfall—Getting the elephant out of the trap.

IT is impossible to imagine a more imposing conquest than that of the Elephant.

In his own country, whether Asia or Africa, the elephant is king, no other animal venturing to oppose him. Lord of the forest, he passes his life in the shadow of the trees, neither harming nor being harmed. A social being, the elephant lives in small herds, varying from ten to thirty in number. Each herd is led by a single male, and in all probability the members of the herd belong to the same family.

During the day they inhabit the recesses of the woods, in which they have a wonderful faculty of

concealing themselves, a full-grown elephant being quite invisible at the distance of ten feet. They possess, moreover, an astonishing capacity for passing through the forest without making the slightest sound, a whole herd gliding among the trees without betraying their presence by a shaken bough or the crack of a dry stick.

By night they leave the forest and make their way to the nearest water, their huge bodies being as invisible in the dusk as among the broken lights and shadows of the wood. Noiseless to human ears as is their step, their approach is perceived by all the other animals which are assembled round the water, and which begin to steal away as soon as they become aware of the elephant's presence. When they have drunk, the whole herd, or tribe, sets off for another feeding place, often passing over twenty or thirty miles with the long, swinging gait which characterises the animal, and seldom passing two consecutive days in the same spot.

No one need stand in fear of these herds, as, if they become aware of the presence of a human being, they slip away in the silent fashion which has already been mentioned, and have been known to pass within a few yards of a hunter without their proximity being detected. Now and then a solitary elephant is to be met, and must be either carefully avoided or killed. He is known as a 'rogue' elephant, who is suffering from a sort of madness to which male elephants are liable, and which causes

them to attack every living creature which they meet. Being dangerous, the rogue is expelled from the herd until his temporary madness has subsided. This peculiar mania is called 'must,' and the tame animals are as much subject to it as the wild elephants.

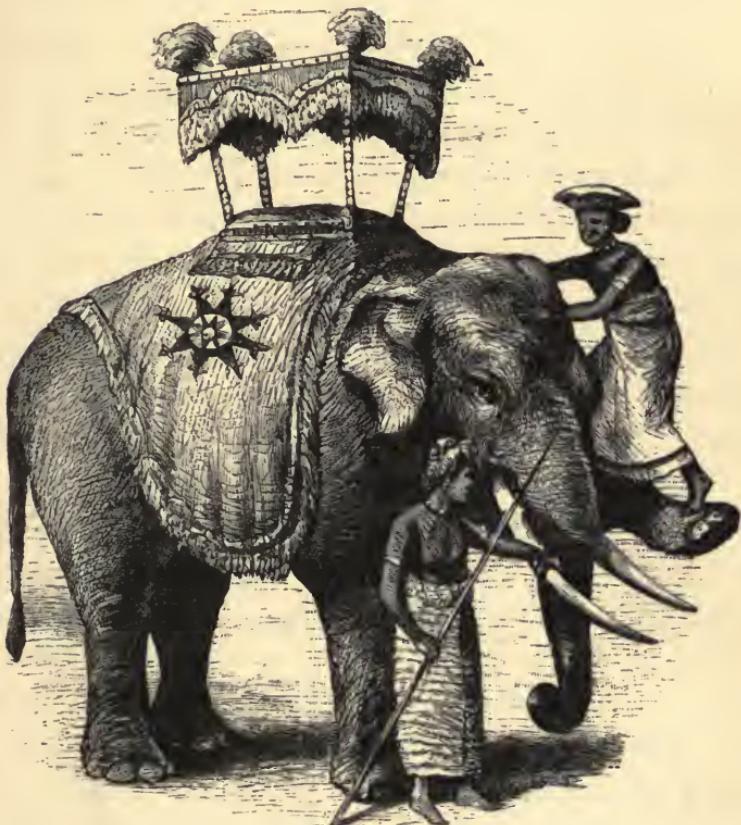
As this work is in no sense a natural history, I do not intend to describe either the structure or the habits of the elephant, except as far as they relate to the connection which exists between the animal and mankind. As, however, it would be impossible to explain the manner in which the elephant is subjected to the dominion of man without enumerating a few of the salient points in its life-history, I am obliged to give this brief sketch of the elephant's ordinary mode of life.

Why should man desire to bring the elephant under his dominion? Of what qualities is the animal possessed that man should need its services? What would be the result to man if he were deprived of them?

That the elephant cannot be placed on a par with the dog, horse, ass, ox, sheep, or even the reindeer, is evident almost at a glance. No race of mankind is in the least dependent on the elephant for its means of living, as we have seen to be the case with other animals. The principal qualities which make the elephant a desirable servant of man are its vast

strength, its intelligence, and the unique organ called the proboscis or 'trunk,' by means of which it performs many of the tasks which man demands from it.

The elephant has never been in general use. It



STATE ELEPHANT.

is the servant of the few, not of the many. The poor have no use for it, so that whenever a domesticated elephant is to be seen, the spectator knows that its owner must be a man of wealth. Indeed, by

far the greater number of tame elephants are little more than visible proofs of the wealth of their owners, and are not put to any really useful task.

Such, for example, were the nine hundred elephants belonging to Sir Salar Jung which Lady Burton saw at Hyderabad in 1870. They are taught to bear a howdah, and decked with silks, velvets, gold, silver, and even jewels, and carry their masters during the great ceremonies of state in which the heart of an Oriental potentate rejoices. Many are trained for hunting purposes, others are kept as fighting animals, while others are trained to war, or to give their aid to the arts of peace. We will now see how the elephant acquits itself under these different conditions.

Firstly, let us give a few lines to the means by which this vast and peculiarly intelligent animal is brought under the dominion of man.

*'Illi robur et æs triplex
Circa pectus erat,'*

sings Horace of the man who first built a ship and ventured upon the ocean. Not less oak and three-fold brass must have encircled the breast of the man who first captured the elephant and reduced it to servitude.

No negro ever ventured on such an exploit. In the first place, he would have no use for the animal's

services, and in the next, the pure negro never thinks of taming any animal. He can kill any animal, and can even slay the elephant for the sake of its ivory, its flesh, and its hide. But the idea of bringing it into subjection and making it work for him never even enters his imagination. We will therefore see how the Indian elephant catchers perform their task.

Three modes are in use, namely, the 'keddah,' the 'koomkie,' and the pitfall. The first-mentioned is that which is most in favour, as by it a large number of elephants can be captured at one time. It is, however, a very costly process, occupies much time, and requires the aid of great numbers of men, all of whom have to be paid for their services. Beside these human assistants, a number of trained female elephants are required, so that none but the wealthy can make use of this mode of elephant-hunting.

The principle of the 'keddah' is exactly the same as that of the 'madrague' net which is used in the tunny fishery. A vast enclosure is formed in the form of the letter V, the sides being sometimes a mile or so in length. The enclosure is formed chiefly by the trunks of standing trees, which are connected together by smaller tree-trunks, so as to form a sort of rude wall. The opening of such an enclosure is nearly half a mile in width. The apex of the V opens into a comparatively small enclosure, the walls of which are of enormous strength, and

formed of tree-trunks bound firmly together. There are no doors, but there is sufficient space between the trunks for the passage of a man.

Great use is made of the flexible creepers which abound in the forests. They hang in festoons from the trees, and are as tough as wire-ropes. When an elephant dashes against them, they give way at the time, but do not break, and when the pressure is taken off them, they return to their former position.

When all is ready, several hundreds of experienced beaters are sent out in order to drive, or rather to coax, the elephant within the walls of the keddah. A tract of some sixty miles square is sometimes traversed by the beaters. They never alarm the animals, and much less do they attack them, but by showing themselves judiciously, and occasionally allowing the elephants to 'wind' them, they induce the animals to enter the opening of the keddah.

Gradually, as the walls narrow, the elephants feel themselves becoming mysteriously crowded together, and halt in their progress. Sometimes they try to retreat, and in that case they find their passage barred by a mob of armed men, who begin to shout, beat tom-toms, and wave lighted torches. Seeing that one way is apparently left open, they rush forwards and enter the keddah itself. Tree-trunks, which have been placed in readiness, are then dropped across the opening, and lashed together before the elephants find out that they are entrapped. When they do discover their plight, their

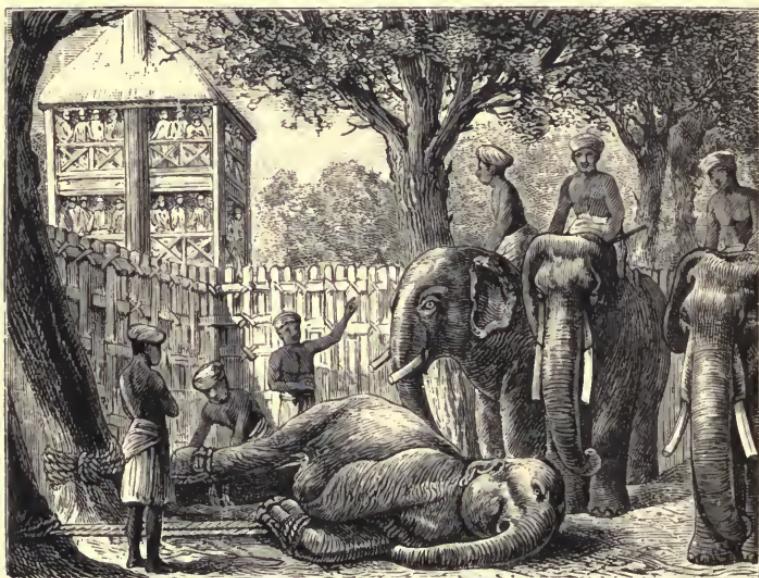
mingled rage and terror are appalling. They hurl themselves with screams of fury at the walls of the keddah, trying to burst through them by their weight. Being unable to succeed, they try to pull down the walls with their trunks, but are at once baffled by the guards who surround the keddah, and who prick the sensitive trunks with their spears, besides firing blank cartridges at them, dashing lighted torches in their faces, and, should their charge be extraordinarily furious, flinging fireworks at them.

At last the terrified animals retire from the fence, and crowd together in the middle of the enclosure. Then comes a very exciting part of the task. The barriers which were thrown across the opening are cautiously removed, and trained elephants, called 'koomkies,' are taken into the keddah, each bearing, beside its mahout, an experienced hunter, and a plentiful supply of strong ropes. The koomkies make their way towards the prisoners, the men lying flat on the animals' backs, so as not to be conspicuous. Picking out an elephant, the mahout lays his own animal alongside it, and by dint of judicious manœuvring, induces it to stand close to a tree. The hunter then slips to the ground, taking with him the cords, and, while the koomkie distracts the attention of the prisoner, fastens its hind feet securely to the tree.

It might be thought that the mahout would be in great peril during this operation, but the only one who runs any real danger is the hunter. It is a

remarkable fact that the imprisoned elephants never seem even to see a man as long as he is on the back of another elephant, though they would detect him when he is on the ground were it not for the kind offices of the tame animals.

When all are secured, the tame animals are withdrawn, and the prisoners left to themselves. An



AN ELEPHANT TIED TO TREES.

extraordinary scene then takes place. No one who has not seen a performing elephant can form even the slightest idea of the activity of this apparently clumsy animal. The captives try every means in their power to release themselves, rolling over and over, twisting their huge bodies into serpent-like contortions, and even turning somersaults in their

endeavours to free themselves from their bonds. Should anyone approach them, they are aroused to new fury, and, in fact, are rather encouraged to resistance, so that they may be completely tired out.

For several days and nights they are left in this helpless condition, food and water being kept from them. Now the elephant, which is continually plucking its food, is not adapted by nature for a long fast, as was amusingly proved some forty years before these lines were written. In all menageries the carnivora are kept without food one day in each week, so as to approach as nearly as possible to the conditions of their natural life. Sunday is always chosen for this purpose, so that the animals may be doubly hungry when feeding time comes on Monday, and so give more amusement to the spectators.

In those days the conditions of animal life were not known as well as they are at present, and the elephants were made to share this involuntary fast. At last the great elephant, Jack, made up his mind that he would stand that kind of thing no longer. For several Sundays he had been so noisy all night that his keepers got no rest, and after finding that these gentle hints had no effect, he began to demolish his door so effectually, that the keepers were obliged to turn out and supply him with his full allowance of food.

A three days' fast, therefore, weakens the captives, and for the time breaks down their spirit. When this condition has been reached, the future mahout

approaches the animal to which he has been assigned, goes very quietly up to the prostrate captive, and offers it some food. If it displays anger at his presence, he retires, taking the food with him. Before long the elephant learns to connect him with food, and instead of being angry, welcomes his presence.

The lesson thus begun is soon learned, and in process of time the animal becomes strongly attached to his mahout, and even though it might escape, never does so. As we have already seen, the tame elephant aids its keeper in capturing other elephants.

A most astonishing example of the dominion of man was given in January, 1887, by Mr. G. P. Sanderson, superintendent of Government elephant-catching operations in Bengal.

He had succeeded in capturing a herd of sixty-eight elephants, when he heard that elephants in very great numbers were in the Garrow Hills, near the Burrumpooter River. He at once conceived the bold idea of securing them all, and by way of commencement drew a cordon of nearly a thousand men round the animals, never leaving a space of more than fifty yards between the men. The cordon extended for about eight miles in circumference when the two extremities had united.

Meanwhile, a small army of labourers was employed in building a vast keddah, and during the whole of the time occupied in the structure not a hut could be built or a fire lighted for cooking food.

When all was ready the elephants were driven into the keddah. But their numbers were so great that the enclosure was too small to hold them, and it was necessary to make supplementary stockades. In three days this was done, and a hundred and thirty-six were taken at once, only one elephant having escaped. The value of this single capture exceeded ten thousand pounds. This remarkable trait of character, which is shared by the horse, is well displayed by the second mode of capture, in which the keddah is dispensed with, and the hunters depend entirely on the koomkies for the capture.

Some of my readers may remember the Exhibition of 1851, and the great Indian potentate, Jung Bahadur, the Nepaulese Ambassador, whose jewels flashed so dazzlingly at the opening ceremony. He was no carpet-knight, and was celebrated not only for his exploits on the field of battle, but for his daring and skill in elephant-catching. A friend of mine, who joined the King of Nepaul and Jung Bahadur in an elephant hunt, sent me a long account of the day's sport, in which he mentioned in most enthusiastic terms the cool courage, activity and skill displayed by Jung, of whom the writer remarks that 'he is a fine fellow, and the greater the danger, the more he enjoys it.'

In this case nine wild elephants were attacked at once, three being secured, and three allowed to escape as being too small to be useful. The leader, an old male, was so furious and powerful that it was

necessary to shoot him, and two females were actually strangled in the nooses.

The acme of this sport is the capture of a 'rogue' elephant by means of the koomkies alone. The danger is, of course, very great; but as a rogue is always a fine male, he is a specially valuable prize.

Two female koomkies are employed for this purpose. They approach, as if by accident, the rogue, who stands sulking apart from his comrades, like Achilles in his tent, and gradually draw near him. They then begin to soothe his wounded feelings by their feminine blandishments until one is at each side of him. Having completely occupied his attention, the treacherous sirens beguile him into walking about with them until they have brought him to some large tree. There they halt and allow the hunters to fasten the deluded animal to the tree, often passing the ropes round his ankles when the hunters cannot reach them without danger of being detected. Sometimes the elephant discovers that he is being deceived, and resists his treacherous beguilers. In that case they immediately alter their tactics, and exchange their caresses for aggression. They beat him with their trunks, they butt him in the ribs, they knock him against the tree, until he is so bewildered that the hunters can complete their task of securing him.

So heartily do they throw themselves into the task, that on one occasion a trained koomkie, called

Lutchmee, absconded from her master, secured with a chain a fine male, and then returned to exhibit her captive. Captain Williamson does not personally vouch for the truth of this story, but states that he himself believes it, and that it was universally accepted by the mahouts.

The third mode of capture has the advantage of dispensing with beaters and koomkies, so that a single man is able to catch an elephant. He sinks a pitfall, taking care to pave it with soft materials so that the elephant may not be injured. It is by no means an easy task to induce an elephant to approach a pitfall, and still less easy to construct the trap so skilfully that the animal will not discover it. If, however, an elephant should be captured, it is treated much as those which are taken in the keddah, and allowed to remain in the pit until quite exhausted for want of food.

Getting it out of the pit is much easier than getting it in. The captor simply hands logs of wood and similar materials to the elephant. Of its own accord the animal places everything which it can seize under its feet, and by degrees raises itself to the level of the ground.

This appears to be almost an instinctive operation. On land of any kind, or in the water, the elephant keeps its senses. It can climb or slide down hills so steep that a man can scarcely surmount them on his hands and knees. It is quite at its ease in the water, and can swim, or even ford deep rivers, breathing

through the tip of its trunk, which acts the part of a diver's air-tube.

But in mud, or anything approaching to a quick-sand, it loses its head altogether. Should an elephant be 'bogged,' as the phrase is, the mahout quits his post on the animal's neck, slips over its tail, and runs away as fast as he can in search of boards, logs, or branches. In its terror the elephant would at once snatch the mahout from its neck, and place him under its feet in its endeavours to reach firm ground.

Here, then, we have a very brief and curtailed account of the various methods by which the elephant is brought under the dominion of man. We have now to glance briefly at the work which it does for him.

CHAPTER XXII.

THE ELEPHANT AND ITS WORK.

Pageantry its chief work—The elephant in war—The book of the Maccabees—Incitement to battle—Topsell's account of war-elephants—The elephant as a standard-bearer—The Peishwa's banner—Death of the mahout—The battle won by the fidelity of the elephant—The mahout's child—Semiramis and her dummy elephants—Porus and Alexander—Abandonment of the elephant as an adjunct to war—Elephant-fighting as a pastime—Jung Bahadur and the Prince of Wales—Jung and Bijli—Chasing and catching a 'tusker'—The elephant as a log-roller—The elephant as a builder—'Scamping' work—The elephant in agriculture—Sir S. Baker's account.

WHAT is its work?

I am inclined to think that pageantry was the primary object of the conquest of the elephant, and that even at the present day the proportion of working-elephants to those which are kept merely for ceremonial tasks is scarcely five per cent. But for the purposes of this work the tiny minority monopolizes the whole of the interest, and we will therefore dismiss the stately animals which do nothing but carry howdahs, and walk in procession at the rate of a mile in four hours. Slowness of progress is in the East equivalent to the rank of the

traveller, 'smartness,' as we understand the word, being a proof that time is valuable, and that therefore anyone who sets a value on so worthless an element in human life must be an utterly inferior being.

In point of priority, the next use of the elephant seems to have been as an engine of war.

A familiar example of this use of the elephant is to be found in the sixth chapter of the first book of the Maccabees, in which we are told that Antiochus had thirty-two war-elephants in his army, and that when they were taken into battle they were shown the juice of mulberries, which they mistook for blood, and were thereby excited to anger.

Topsell asserts that in some parts of India the elephants were covered with armour, even their trunks being thus defended, and that to the end of the trunk was attached a sword-blade of three feet in length.

'Then at the sound of the trumpet he beginneth with teeth to strike, teare, beate, spoyle, take up into the air, cast down againe, stamp upon men underfeet, overthrow with his trunke, and make way for his riders to pierce with speare, shield and sword, so that his horrible voice, his wonderfull body, his terrible force, his admirable skill, his ready and inclinable obedience, and his straunge and seldom-seene shape, produced in a maine battell no meane accidents and overturnes.'

He then proceeds to inform his readers how special weapons were invented for the purpose of cutting off the elephants' trunks and assailing them in various ways.

One notable use of the war-elephant was its employment as a standard-bearer, the staff of the flag being affixed to the animal's saddle. The story of the Mahratta elephant which bore the great battle-standard of the Peishwa may be familiar to some of my readers, but is too characteristic to be altogether omitted.

The mahout was killed, and as he fell, he called to the elephant to stand fast. At first the action went against the Mahrattas, but, seeing the standard still flying, they rallied round it and remained masters of the field. The battle was over, but the elephant refused to stir without the orders of its dead master. At last it was remembered that the mahout had a little son who had more than once given orders to the elephant as a substitute for his father. The village in which the mahout had lived was a hundred miles from the battlefield, but messengers were sent for the boy, and as soon as the faithful animal heard the child's voice, he obeyed it, and moved from the spot on which he had stood for three days and nights.

In the history of the struggle between Semiramis and Stabrobates, as told by Diodorus, the elephant not only plays a very conspicuous part, but imports an unexpected comic element into the tragedy of war.

The Indian king had a large contingent of war elephants, whereas the Assyrian queen had none. However, Semiramis was a woman of resources, and, as she had no real elephants, she determined to terrify the enemy by an imposing force of dummies, thus anticipating the defence of a fort by dummy cannon made of tree-trunks. She had several thousand black oxen killed, and with their skins she covered a number of wickerwork elephants, each being carried on a camel.

The stratagem was at first successful, Stabrobates being much alarmed at the appearance of so formidable an addition to his enemy's forces. Unfortunately for Semiramis, some deserters told Stabrobates of the deception, and he at once gave battle. Now came an unforeseen turn in events. Stabrobates opened the action with his chariots, and boldly charged the dummies. But, the chariot horses, which were accustomed to engage with real elephants, were seized with terror at the sight and smell of the dummies, turned round, and charged back into their own ranks, carrying dismay and destruction with them.

Stabrobates, however, was equal to the occasion, and, allowing the terrified horses to pass to the rear, he brought forward his real elephants against the dummies. The camel-drivers did their best, but the elephants broke through their ranks by the sheer weight of their charge, upset the camels, tore the dummies to pieces, and soon converted the battle

into a rout, Semiramis being twice wounded by the king himself, and barely escaping with her life.

Our limited space only permits me to allude briefly to the great battle fought by Alexander the Great against Porus. When the Hydaspes had been passed, the army of Porus was seen drawn up in battle-array, the van and flanks being guarded by elephants placed a hundred feet apart, so that the chariots, which were drawn up behind them, could charge through their lines. At first, the mail-clad elephants did terrible service, and the tide of battle seemed turning against the invaders. Alexander, however, with the swift generalship for which he was distinguished, told off a special body of warriors to attack the elephants alone, disregarding the human enemy. The plan answered, and the elephants, following the example of Stabrobates' horses, broke from the control of their drivers, and charged into their own ranks, thus creating a panic of which Alexander was not slow to avail himself.

Many years have now elapsed since the elephant has been employed in war, except as a beast of burden or traction. The elephant is invaluable in getting guns into position and similar tasks, but is worse than useless as a combatant, being liable, as we have seen, to work havoc in its own ranks instead of those of the enemy.

I have already casually mentioned that certain

elephants are trained to fight with their own kind, elephant fights being even now popular amusements in India.

In Mr. Knighton's 'Private Life of an Eastern King,' there is a graphic account of a battle which was fought by two elephants belonging to the King of Oude. The fight rather resembled a wrestling match than a battle, each combatant straining all its powers to force the other backwards, just as is done by the stag. Both animals employ this manœuvre, not as the final object of the battle, but as a means of bringing the tusks to bear on the unprotected flanks of the foe.

During the whole of the battle, the mahouts are seated on their respective animals, urging them by voice as well as by blows of the 'haunkus,' or iron hook, with which all mahouts are armed. It is no easy matter to retain a seat on a fighting elephant, and therefore the bodies of the animals are covered with a stout network to which the rider can cling.

For such combats the elephant is always selected while in the 'must' state which has already been described. The keeper of the elephants has a most perilous task to perform. At any hour, his master may order an elephant fight, and woe be to him if he cannot produce at once two elephants in a fit condition for battle. The 'must' madness only endures for a limited time, and can neither be induced nor retarded artificially. Now, an Oriental magnate is in many things a mere spoiled child. Whatever he

may happen to want, or even to think that he wants, he must have at once, and, like a child, he has no idea of waiting. The head-keeper therefore watches his charges with ceaseless anxiety, knowing that if by any unlucky chance an elephant fight should be ordered when no 'must' animals are in his keeping, he will certainly lose his post, and probably his life.

Sometimes a fight of a more genuine character takes place, the professional fighter being taken into the jungle, and matched against a wild 'tusker.'

When the Prince of Wales made his visit to India, he was the guest of Jung Bahadur, whose skill in elephant catching was mentioned in the last chapter. His host entertained his royal guest with an elephant fight of this description.

Two professional combatants were employed, one, named Jung, being noted for his enormous size and strength, while the other, poetically named Bijli, or Lightning, was equally renowned for speed. The trackers soon found a fine 'tusker,' who was by no means disposed to yield, and who charged with such ferocity that he put to flight the assailants as fast as they drew near. But when Jung, the largest of Jung Bahadur's eight hundred picked elephants, showed himself, the tusker turned tail and fled. Jung was too heavy for pursuit, and gave place to Bijli, who went off in chase. The tusker soon found that he had no chance of escape, and so turned round and offered battle. He had met more than his match, for Bijli was as good at fighting as at running, and

before Jung could come up, knocked his antagonist out of time through sheer skill, and delivered him over to be fettered and enslaved.

As to the arts of peace, it is difficult to say what an elephant can *not* do. Not long ago, a fashion arose of depreciating the intellect of the elephant, and pronouncing it to be rather a stupid animal, whose powers had been greatly exaggerated. Let us put this criticism to the test by taking the evidence of persons whose names are known to the world. Take, for example, Sir Emerson Tennent's account of the Cingalese elephants and their work. I regret that our limited space prohibits me from quoting his very interesting accounts, and must content myself with a very bald abridgment of his account. The timber trade of Ceylon is one of great importance, and the elephant is found to be invaluable in piling the timber. When the animal has once been taught its task, it can continue to work without even the aid of an overseer. Other elephants are taught to act as builders, and always to summon the overseer as soon as they have laid a course of stones, so as to obtain his approval before they lay a second. One of these animals was observed by the overseer to stand in front of a certain portion of the wall, so as to hide it from observation. The overseer insisted on seeing the whole of the wall, whereupon the elephant, who had 'scamped' a portion of his work, voluntarily pulled down the defective portion and relaid it. In fact, he acted very much like a British workman.

Turn we to another well-known traveller, Sir Samuel Baker, and see what he has to say of the elephant as an agricultural labourer. Everyone must have heard of Barnum's elephant, which he bought on speculation, without having the least idea what to do with the animal. A happy thought then struck him, and he hired a field just outside the New York station, and set the animal to ploughing. There was not the least necessity for ploughing the field, nor was the plough ever at work except during the time when a train was entering or leaving the station. The elephant was only acting as an advertisement for its owner's museum, which at that time formed the prominent attraction of Broadway. But, in his 'Eight Years in Ceylon,' Sir S. Baker gives an account of the work which a single elephant was seen by himself to do.

'The "cultivator," which was sufficiently large to anchor any twenty of the native bullocks, looked a mere nothing behind the splendid elephant that worked it, and it cut through the wiry roots of the rank turf as a knife peels an apple. It was amusing to see this same elephant doing the work of three separate teams when the seed was in the ground. She first drew a pair of heavy harrows ; attached to these and following behind were a pair of light harrows, and behind these came a roller. Thus the land had its first and second harrowing and rolling at the same time.

' This elephant was particularly sagacious ; and her farming work being completed, she was employed in making a dam across a stream. She was a very large animal, and it was beautiful to witness her wonderful sagacity in carrying and arranging the heavy timber required. The rough stems of trees



ELEPHANT CARRYING A LOG.

from the lately felled forest were lying within fifty yards of the spot, and the trunks required for the dam were about fifteen feet long and fourteen to eighteen inches in diameter. These she carried in her mouth, shifting her hold along the log before she raised it until she had obtained the exact balance,

then, steadyng it with her trunk, she carried every log to the spot, and laid them across the stream in parallel rows. These she herself arranged (under the direction of her driver), with the reason apparently of a human being.

‘ The most extraordinary part of her performance was the arranging of two immense logs of red



ELEPHANT ROLLING A LOG.

keenar (one of the heaviest woods). These were about eighteen feet long, and two feet in diameter, and they were intended to lie on either bank of the stream, parallel to the brook and close to the edge. These she placed with the greatest care in their exact positions, unassisted by anyone. She rolled them gently over with her head, then with one foot, and keeping her trunk on the opposite side of the

log, she checked its way whenever its own momentum would have carried it into the stream. Although I thought the work admirably done, she did not seem quite satisfied, and she presently got into the stream, and gave one end of the log an extra push with her head, which completed her task, the two trees lying exactly parallel to each other, close to the edge of either bank.

‘Tame elephants are constantly employed in building stone bridges, when the stones required for the abutments are too heavy to be managed by crow-bars.’

CHAPTER XXIII.

THE ELEPHANT (*concluded*).

Sir Emerson Tennent's opinion of the elephant—The elephant in Ceylon—Limits of the elephant's endurance—Average cost of its daily labour—A recalcitrant elephant and his revenge—Daily life of an Indian elephant—Gathering forage—Elephants and mosquitoes—The elephant as a nurse—Self-denial of an elephant—A new departure in elephant life—Capriciousness of an elephant's selection of a keeper—Cato and 'Colonel' David Scott—The Asiatic elephant taken to Africa—Difficulty of getting ashore—A two-miles' swim—Prognostications of the future—The racial question and the elephant—The elephant in religion—The 'white elephant' of Burmah and Siam—Divine honours paid to the animal—A regal present—A young white elephant and his human nurses—Tragic end of a white elephant—Man and extinct elephants—The mammoth and the mastodon.

DESPITE its usefulness, however, Sir Emerson Tennent doubts whether the animal can be considered as anything but a provisional aid to man. Its skin, thick as it may be, becomes sore under heavy burdens, and the sores are sadly liable to ulcerate and to disable the animal altogether. Then, the sole of the foot is easily pierced, and the cattle murrain, which inflicts such damages on flocks and herds, does not spare the elephant.

Sir Emerson tersely sums up the result of his

experience as follows : ' On the whole, there may be a question as to the prudence or economy of maintaining a stud of elephants for the purposes to which they are assigned in Ceylon. In the rude and unopened parts of the country—where rivers are to be forded, and forests can only be traversed by jungle paths — their labour is of value in certain contingencies ; in the carrying of stores, and in the earlier operations for the construction of fords and bridges of timber. But, in more highly civilized districts, and wherever macadamized roads admit of the employment of horses and oxen for draught, I apprehend that the services of elephants might with advantage be probably reduced, if not altogether dispensed with.'

The expense of the keep of an elephant is so considerable that it detracts greatly from the value of the animal's work. Seven shillings per diem is the least sum at which its maintenance can be reckoned, and it can seldom do more than four days' steady work in the week.

The powers of the elephant are by no means so inexhaustible as its owners often imagine. Moreover, the animal, like the camel, knows what burden he ought to bear, and resents any attempt at over-loading.

In his ' *Olla Podrida*,' Captain Marryat narrates a very amusing anecdote of an offended elephant. His special duty was tent-carrying, and when the marching orders were given, tent after tent was

heaped upon him. At last, he roared out a remonstrance to the effect that he really could not be expected to carry any more. One tent, however, was left, and the officer in command, thinking that one more or less could not signify, had it added to the others.

‘When the last tent was put on the elephant, he was like a mountain, with canvas on each side of him bulging out to a width equal to his own. There was just room for him to pass through the two rows of houses on each side of the street.’

The order to march being given, the elephant more than obeyed it. He set off at a smart trot through the narrow street, sweeping away everything and everybody in his way, even knocking over the donkeys which were carrying the wine for the officers’ mess, and leaving behind him a confused mass of donkeys and coolies on their backs ; while wines and spirits of various kinds poured in rivulets along the narrow lane which in Eastern cities does duty for a street.

The same author’s account of the life of an elephant while off duty is not known as well as it deserves : ‘Perhaps the reader will like to have the diary of an elephant when not on active service. At what time animals get up who never lie down without being ordered, it is not very easy to say. The elephants are stalled at the foot of some large tree, which shelters them during the day from the extreme heat

of the sun ; they stand under this tree, to which they are chained by their hind legs.

‘ Early in the morning the keeper makes his appearance from his hovel, and throws the respective keys down to the elephants, who immediately unlock the padlocks of the chains, cast themselves loose, and in the politest manner return the keys to the keeper. They then march off with him to the nearest forest, and on their arrival commence breaking down the branches of the trees, selecting those which are most agreeable to their palates, and arranging them in two enormous fagots. When they have collected as much as they think they require, they make withies and bind up their two fagots, and then twist another to connect the two, so as to hang them over their backs down on each side ; and having thus made their provision, they return home. The keeper may or may not be present during this performance. All depends upon whether the elephants are well trained, and have been long in servitude.

‘ Upon their return, the elephants pass the chains again round their legs, lock the padlock, and present the key as before ; they then amuse themselves with their repast, eating all the leaves and tender shoots, and rejecting the others. When an elephant has had enough to eat, he generally selects a long bough, and pulling off all the lateral branches, he leaves a bush at the end, forming a sort of whisk to keep off the flies and mosquitoes ; for although the hide of the elephant is very thick, still it is broken into crannies

and cracks into which the vermin insert themselves.'

The reader will probably remember the story of the Mahratta elephant and its child-keeper. A scene which was witnessed by Captain Marryat affords a strong corroboration of the truth of the story. Captain Marryat had been watching the proceedings of a very large elephant, and had been much interested by the manner in which it had been defending itself from the mosquitoes by means of a large branch.

' As I said before, the elephant showed, by constant flagellation of his person, that he was much annoyed by his persecutors ; and just at that time the keeper brought a little naked black thing, as round as a ball, which in India I believe they call a child, laid it down before the animal with two words in Hindostanee, "Watch it," and then walked away into the town.

' The elephant immediately broke off the larger part of the bough, so as to make a smaller and more convenient whisk, and directed his whole attention to the child, gently fanning the little lump of Indian ink, and driving away every mosquito which came near it ; this he continued for upwards of two hours, regardless of himself, until the keeper returned.

' It was really a beautiful sight, and causing much reflection. Here was a monster, whose bulk exceeded that of the infant by at least two thousand times, acknowledging that the image of his Maker, even in its lowest degree of perfection, was divine ;

silently proving the truth of the sacred announcement that God had given to man dominion over the beasts of the field. And here, too, was a brute animal setting an example of devotion and self-denial which but few Christians—none, indeed, but a mother—could have practised.'

A remarkable instance of this instinctive attachment of the elephant to man occurred a few years ago, a baby elephant having contracted so inordinate a love for its keeper, that the poor man's life was rendered a burden to him. He was obliged to sleep by its side, and if he were absent for only a few minutes, its lamentations were pitiful.

Even after attaining mature age, the much-regretted Jumbo was so much attached to his keeper, Scott, that the man was forced to be always within reach of the animal, no one else being able to control the huge beast whenever he took a fit of waywardness. Yet Scott is a European, and Jumbo was a native of Africa.

The last action of his life showed his strong attachment for his keeper. Just as he was struck by the engine which killed him, he seized Scott with his trunk and pushed him on one side. 'Many times,' said Scott, 'he (Jumbo) has picked me up, and placed me out of danger of various kinds to which he fancied I was exposed, and in several instances he saved my life. When the stampede of elephants took place last year, he caught me in his trunk, and

held me a prisoner between his fore-feet until the general alarm had subsided.'

Some years ago a similar example of exclusive attachment was given by an elephant named Cato. The animal belonged to an American circus, but was so evil-tempered that he was always kept chained to a post. One afternoon, just as the performers had entered the arena, Cato was seized with one of his fits of rage, broke loose, and, according to his custom, began to tear and smash everything, living or not, that he could reach. In two seasons he had killed three keepers and crippled two others, so that to oppose him was almost certain death.

Among the performers was a boy of eleven, whose stage name was 'Colonel David Scott, the Child-Wonder.' The elephant suddenly made for the boy, who was thrown from his horse. The elephant picked him up, held him high in air, and swung him backwards and forwards several times, as if intending to serve him as he had served others. Suddenly he put the boy down, caressed him for a moment, and then went on with his work of destruction.

One of the menagerie men, who knew the nature of elephants, threw the 'haunkus,' or driving-hook, to young Scott, and told him that the animal would obey him. The boy picked up the hook, ran to the elephant as he was tearing up the benches, and called him off. Cato instantly obeyed, followed the boy to the post, and allowed himself to be again secured to it.

From that hour he was Cato's keeper, and, boy as he was, earned four hundred pounds per annum in the performance of his perilous task. He always slept with the animal, and for three years was never out of the elephant's sight for four consecutive hours. So attached was Cato to the lad on whom he had so suddenly set his affections, that he came to his death in consequence of an enforced separation. David Scott's account of Cato's last days must be given in his own words :

' He would take food and water from someone else, but it ended there. If anyone sought to order him in the least thing he flew into a rage. I had a real affection for Cato, and no human being could have shown me greater care than he did. We had been three years together, and the fourth had begun when I was taken ill. A fever came on me very suddenly, and I was left with a nurse at a public-house in a Pennsylvania village.

' Cato missed me at once, and the men had all they could do to get him on to the next town. He was chained by both hind-feet as soon as the show opened, and he sulked all the afternoon and exhibited symptoms of a coming storm. A suit of my clothes was placed before him, and he grew calmer ; but when out on the road again and not finding me beside him, he could contain himself no longer.

' When the climax came, the circus was watering the horses at a brook. Cato upset three waggons,

killed a horse and a camel, and then flung down the fence and rushed across a field and into a piece of woods. All efforts to control him proved futile, and his rage increased until no one dared to go near him. After watching him for three days they sent a carriage for me, but I was too ill to be moved.

‘They waited two days longer, and as Cato then began destroying valuable property and blockading travel on the highway, it was determined to kill him. He was a great lover of apples, and a number of them were filled with poison and placed with others where he would find them. A man on horseback rode as near the elephant as he dared go and dropped the apples in a basket, and Cato was eating them five minutes later. Next morning he lay on his side in the meadow, dead and stiff, but it was long weeks after that before they dared break the news to me.’

In 1882, a memorable episode occurred in the history of the elephant.

Both African and Asiatic elephants had been brought to Europe, but, until that date, the animals had not exchanged continents. The King of the Belgians, who has always taken a deep interest in physical geography, determined to face the apparent anomaly which up to the present time baffled all attempts at solution. From time immemorial, the Asiatic races have asserted their dominion over the Asiatic elephant; so has the European, the elephant

obeying (and loving) the English keeper as devotedly as it loves the Indian mahout.

Hoping to induce, by examples such as have been narrated, the African races to capture and tame their elephant, instead of destroying it for the sake of its ivory, the projectors of the scheme which was so ably supported by the King of the Belgians sent, at great expense, several trained elephants to Africa. When they reached Zanzibar, they could not be landed, as the nature of the shore forbade ships to approach within two miles. As elephants are good swimmers, one of them, the Budding Lily, was lowered into the water with her mahout on her back. At first the animal was horribly frightened, and actually tried to scramble on board again. At last, however, the mahout made her understand the task which she had to perform, and she made her way ashore, followed by her comrades.

The moral effect upon the natives was all that could be desired, and great were the rejoicings at the success of the experiment.

‘Before long,’ wrote a correspondent of the *Daily Telegraph*, ‘many an African king, instead of driving the herds deeper and deeper into the forest, and decimating them there with spears, arrows, and pitfalls, will no doubt bring up young elephants to domestic service. The habit would soon grow, and Bombay might greatly aid by sending trained animals to the African missionary stations, with

mahouts and experienced keepers who could teach their art.

‘This is no sentimental matter, but one which concerns the future development of Africa as a new world of trade and civilization. Too long have these majestic denizens of the African woods—who are so teachable, strong and useful—been treated like enemies, when they are the natural friends of man.’

Alack and alas ! except in proving that the Asiatic elephant could do good service in Africa, the experiment came to an untimely end. The keepers who were entrusted with the care of these precious animals seemed to have been the analogues of the ordinary groom. They knew no more of the anatomy of an elephant than does the groom of the structure of the horse. They underfed the elephants and over-worked them, so that the animals succumbed to their evil usage.

The elephant would be especially useful in Africa, because it is impervious to the dread ‘tzetze’ fly, which sweeps off horses and cattle by the hundred.

I very much doubt, however, whether the aboriginal negro can be taught to capture and tame the elephant. There is the question of race to be considered, and I cannot believe that the negro will ever try to bring the elephant under the dominion of man. He may become a most efficient assistant under the command of a European, but that he should

take the initiative in capturing and training the elephant, I cannot admit. That the African elephant can be captured and taught by European or Asiatic trainers, I can well believe ; but that African aborigines will ever enslave the African elephant as the Indian aborigines have enslaved the elephant of Asia, I cannot believe. No blame is attachable to the aborigines in question ; the question is simply one of race ; and, however much we might rejoice in seeing the African elephant become as universally domesticated as its Asiatic relative, I cannot believe that such a dream will ever be realized until the aboriginal African has been superseded by a higher race of mankind.

We will conclude this brief sketch of the relationship of man and the elephant by a glance at the connection of the elephant with religion.

We have already seen how the Hindoos hold a certain species of monkey as sacred, because they accept it as a visible incarnation of the god Hunuman. Also we have seen how the ancient Egyptians treated a bull possessed of certain marks as the incarnation of the god Apis. The ancient snake-worship still survives in some parts of Africa, where even the accidental killing of a snake is a nearly inexpiable sin, for which death is almost invariably the penalty.

It is not, therefore, wonderful that the elephant

should be ranked among sacred animals. Such is the case in Burmah and Siam, where an elephant with certain bodily characteristics is considered to be an incarnation of Buddh, just as a bull was held to be an incarnation of Apis.

It is, however, rather singular that such a belief should prevail in Siam, where for many years the throne has been held by highly educated and enlightened men, whose varied knowledge would do credit to any monarch.

Everyone has heard of the white elephant, and is aware of the high honour in which it is held. The name, by the way, is not a very correct one, as no such animal as a really white elephant ever existed. The white elephant is simply an albino, just as we have white mice, rats, peacocks, and even white blackbirds. The albinism of the elephant, however, must be much more complete than that of furred and feathered creatures, as it is caused by the absence of the colouring matter which underlies the epidermis, and which gives the characteristic hue to the animal. The black, red and yellow races of men all owe their distinctive hues to this colouring matter, and all are liable to albinism.

That the court of Siam should ever be without a white elephant would be considered as great a national calamity as for the bull Apis to find no successor. Even a partial, or 'piebald,' albino is better than nothing, and, so to speak, may serve to carry on the succession until a more perfect animal be found.

When, therefore, the discovery of a white elephant is reported at court, the whole resources of the kingdom are employed in order to secure the animal without injury. When it is taken, not even the king can receive higher honours. Silver, gold and jewels are lavished on so sacred a being, and no one dares to oppose his slightest wish. The fortunate captor becomes *ex-officio* a noble of the highest rank, and is furnished with lands and money by which he can maintain his dignity.

Captain Marryat was fortunate enough to obtain much original information respecting the sacred being, and was the envied possessor of a tooth belonging to a white elephant which had died some years before his visit. When it is remembered that the late King of Siam, when desirous of doing special honour to Queen Victoria, presented her with a tuft of hairs from the tail of a deceased white elephant, Captain Marryat might be well proud of possessing such a treasure. His account of a baby white elephant is peculiarly interesting, and, as it is not generally known, I give it in his own words.

'The third white elephant, who might be considered as the heir apparent, was taken a few months previous to our declaring war against the Burmahs. He was very young, his mother had been killed, and he yet required partial nourishment. He was brought to Rangoon, established in one of the best houses in the place, and an edict was sent forth from the capital,

ordering that twenty-four of the most healthy young married women should be dedicated to his wants, and if they fell off in powers of nourishment, be replaced by others. This was considered an honour, for were they not nursing a *god*?

‘Major Canning, the political agent, who went to see this curious spectacle, described it to me as follows :

‘“The animal was not above three feet and a few inches in height ; its colour was a dirty gray rather than white ; it was very healthy, playful, and in good spirits. When I went into the room, which was very spacious, and built of teak wood, the twenty-four nurses were sitting or lying on mats about the room, some playing at draughts and other games, and others working. The elephant was walking about, looking at them and at what they were doing, as if he understood all about it. After a short time the little deity felt hungry, and with his trunk he pushed some of the women ; but, to annoy him, they would not yield to his solicitations. When he became angry, and was too rough for them, they submitted, and he put his trunk round their waists in the most affectionate manner while he was supplying himself.”’

One of these animals lately came to a tragic end.

Without the usual warning, *i.e.*, a liquid exuding from a small aperture on either side of the face, a fit of ‘must’ madness suddenly came on, and in a few

moments he trampled five of his attendants to death. No one knew what was to be done with the infuriated animal, for he might not be injured, and much less killed, and went raging about, once nearly destroying the high priest himself.

At last he was induced to enter one of the courts of the palace, but immediately began to batter down the walls. Suddenly, with a cry of rage, he fell over on his side and expired, having apparently died of sheer anger, the result of being crossed for the first time in his life.

These pages would be more than imperfect if they did not contain some reference to primæval man and his dealings with the elephant of his epoch.

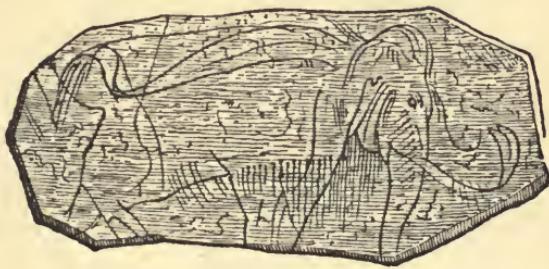
Two members of the elephant tribe stand out with special prominence, one having inhabited the Old and the other the New World. The former of these animals is popularly known by the name of the 'mammoth' (*Elephas primævus*), whose bones and tusks are found plentifully scattered over those parts of the Old World where investigators have been able to carry out their work.

That even in those early times man exercised his dominion over the mammoth is evident from the testimony of the relics which have been so wonderfully preserved by ice and soil. That the man of those days, who was little more than a savage, could kill the mammoth is proved by the discovery of

barbed arrow-heads formed from reindeer-horn being found imbedded in the bone of the mammoth.

This seems at first sight to be a most astounding fact, and, indeed, was, when first discovered, scarcely credited. The reindeer, from whose horn the arrow-heads were made, is essentially a northern animal, delighting in snow and ice. But the elephants, whether Asiatic or African, are essentially inhabitants of the tropics. How, then, is this apparently conflicting evidence to be reconciled?

The key to the mystery is a double one, or rather,



THE MAMMOTH.

has been broken into halves, one of which has lain hidden until modern times. We will first take the ancient half of the key.

Attention has already been drawn to the astonishing artistic powers of the early races of man. Upon a fragment of the tusk of a mammoth was discovered a rude sketch, which evidently represented the animal from which the tusk was taken. But, though the drawing (or rather the engraving) clearly represented one of the elephant tribe, the animal was covered with hair, which was of very great length

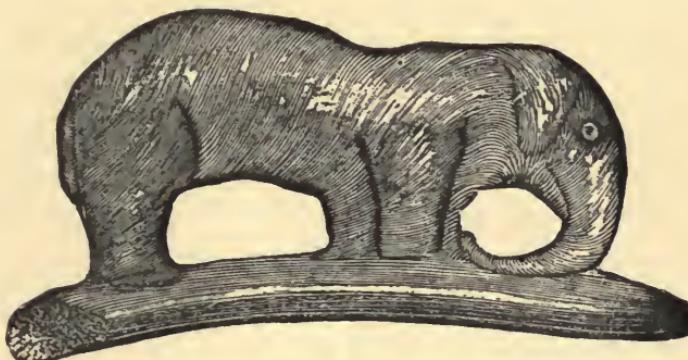
on the shoulders, reaching half-way down the fore-legs. This hairy coating looked at first as if it were an invention of the prehistoric artist, but recent discoveries have proved that he was right, and that the mammoth wore a three-fold coat of fur and hair, enabling the animal to inhabit the same cold country as that of the reindeer. Specimens of this hair may be seen in the museum of the College of Surgeons, and are so perfect that the ancient artist might have used them as his models.

Now we will turn for a moment to the extinct elephant of America, which is known by the name of 'mastodon.' A singularly perfect skeleton of this animal is in the Warren Museum, Boston, Mass. It is peculiarly valuable because it is not composed, as other skeletons have been, from bones taken from different individuals, but is the veritable skeleton of a single individual. A good coloured drawing is also in the museum, showing the skeleton as it lay, with every bone in its place.

As has been the case with the mammoths, the mastodon had evidently been 'bogged,' and, like the elephants of the present day, had been unable to extricate itself from the mud. The date of its extinction is not known, as the peat-bed in which they were found lying is extremely irregular in the rapidity of its formation.

In all probability the mastodon, like the moa, retained its place in the world until modern times. When Catlin was prosecuting his researches among

the North American tribes, he met with many legends of the 'big bull' as having existed within the memory of living men. Moreover, within the skeletons of two of these animals the contents of the stomach have been discovered. They consisted of small twigs, partly masticated leaves, and grass, as well as a reed which is still plentiful in various parts of the United States. That the death of the animal must have been proportionately recent is evident from the



MASTODON PIPE.

fact that the fragments were sufficiently fresh for identification.

As for the dominion of man as exercised upon the mastodon, we have at present no such direct evidence as we have with the mammoth. But, according to the legendary traditions of the 'big bull,' it fell a victim to certain mythical warriors, much as the dragon (which has been proved to be a pterodactyl) is said to have fallen under the lance of St. George, the Knight of Rhodes, and other heroes.

An unexpected proof that man and mastodon

were contemporaries has lately been found in a peculiarly formed stone pipe, two specimens of which were discovered by different persons within four years of each other.

The first which was brought before the notice of the world was dug up in Davenport, Iowa, by the Rev. Peter Gass, who, with several members of the Davenport Academy of Natural Sciences, was exploring some earth-mounds which existed in the neighbourhood. That it represented one of the elephant tribe was evident, and, as the mastodon was the only elephant that could have lived in that part of the world, its identity cannot be doubted.

The form of this pipe is almost identical with that of a Kafir snuff-box in my collection, the chief difference being that the pipe is carved from stone and the snuff-box formed of clay mixed with blood.

Some little time after this pipe had been described, another specimen came into the possession of the Academy. It was ploughed up in 1873 by Mr. Peter Mare, who had not the least idea of its value, but smoked it himself for some time. He then gave it to his brother-in-law, who sold it to the Academy. Similar pipe-bowls formed of clay, and representing the gorilla, are still made by the natives of Western Africa.

CHAPTER XXIV.

CONQUEST OF THE SWINE.

Geographical range of the swine—Abhorrence of the hog—The peccaries of America—Their ferocity—Attacking a train—The wild boar of Palestine—Boars of the Tigris—Lady Anne Blunt and the wild boar—Sad fate of Ariel—Activity of the wild boar—‘Ringing’ pigs—The pig and the hollow tree—Swine of the New Forest—Pigs of Langen-Schwalbach—The ‘Schwein-General’ and his staff—Duty of ‘Flibbertigibbet’—Dimensions of the tamed animal—Captain Basil Hall and his pig Jean—Uses of the hog—Captain Cook and the hog—Influence of the hog on the Pacific Islanders—Swine *versus* cannibalism—Fecundity of the swine—Pork, lard, hide, and bristles—Delicacy of scent—Truffle-hunting—A sow pointer—Intellect of the hog—Varieties of the hog—A solid-hoofed breed.

LIKE the elephants, the swine exist both in a wild and domesticated state; the latter animals always reverting to their original appearance and habits when they are removed from the immediate control of man.

Spread originally over the greater part of the Old World, the hog (as I shall for convenience’ sake designate the domesticated swine) has been imported

into America and into the whole of the Pacific Islands, and exercises a marvellous influence upon the human inhabitants of its new domiciles. When the hog was first brought under the dominion of man it is impossible to say, but in the earliest records of human history the hog is represented as the servant of man, as has been mentioned on page 70.

Another element is introduced into this subject by the utter loathing and horror with which the hog is regarded by a very large portion of the civilized world. Mutually antagonistic as are the Jews and Mahometans on religious questions, they agree with each other in their detestation of the hog. Throughout the whole of the Scriptures the hog is never mentioned save as an abomination, and some of the stricter Jews will not pollute their lips by the pronunciation of its name, speaking of it periphrastically as 'the unclean one.'

I do not think that this abhorrence of the swine was due to its prohibition by Moses, as the same prohibition is shared by many other animals, none of which excite the utter loathing with which the hog is regarded both by Jews and Mahometans. Neither is it likely that Moses was the first to denounce the hog as an unclean animal, the Egyptians, among whom he received his education, being fastidiously scrupulous in their diet. Joseph, in his character of an Egyptian noble, could not eat at the same table with his brothers, because they were herdsmen, 'an abomination to the Egyptians,' among whom their

descendants lived and multiplied for more than two centuries.

Whatever may have been the cause of this detestation of the hog, it was so loathed by the Jews, that it is difficult for us who belong to a different race to realize the unutterable degradation of the prodigal son, when he was compelled to pass his whole existence among swine. Nor is this horror of swine peculiar to the Jews and Mahometans. The caste-following Hindoos, who could not have gained their ideas on the subject from the law of Moses, are equally prejudiced against the hog, and consider that its mere touch is pollution. Being ignorant of this feeling, an English officer of very high rank once made a mistake which might have led to serious consequences. Being pleased with the little son of a Hindoo noble, he took up the child, and placed it before him on his saddle. Now, the saddle, being English, was made of pigskin, and the result was that the child was so contaminated that he could not be received among his own people until he had gone through a long series of purifications in a cowshed.

Some ingenious travellers in Oriental countries hit upon a plan for protecting themselves against the insatiable curiosity of the natives, who swarmed round them like flies, and never allowed them to have a moment's peace. At meal-times they always produced some ham or bacon, the result being the same as that of Wamba's shield of brawn on Isaac at the tournament.

We are told in ancient history that when Jerusalem was besieged by Aristobulus, the walls were so closely environed that no animals could be obtained for the daily sacrifices on which the Jewish religion was based. The besiegers, however, allowed the inhabitants to purchase daily a lamb, which was drawn up in a box. The siege having lasted longer than was expected, one of the soldiers, thinking that the city owed its powers of resistance to the sacrifices, substituted a pig for a lamb. The animal was drawn up, but when it had reached the level of the Temple it tried to escape from the box, and in its struggles put its fore-feet upon the sacred wall, thus defiling the Temple, while at the same moment an earthquake shook the whole of Judea.

A somewhat ludicrous use was lately made of this abhorrence of the hog. A ship was largely manned by Lascar sailors. As long as the vessel was in the warmer latitudes, the Lascars worked fairly enough. But when the higher latitudes were reached, the men, who never before had known what cold meant, began to shirk their duty, and at last refused to come on deck at all. Threats and even blows were useless, until a happy thought struck the captain. He fastened a pig to a rope and lowered it into the Lascars' quarters. The result was immediate, all the recusants rushing on deck to escape contact with the contaminating animal.

In order to realize the dominion of man as exer-

cised upon the hog, we must first examine its appearance in the wild state, and then trace the processes by which it became subject to man. Then will follow the reflex influence of the hog on man, together with its various uses, and the amount of intellect with which it is naturally gifted, and lastly, a brief account will be given of the varieties of form which man has forced it to take.

I have already mentioned that the hog belongs essentially to the Old World. It is true that we may read in several books of travel of wild swine which are found in America, and are dreaded by travellers who unexpectedly disturb them. These animals, however, are not true hogs, but a much smaller species called by the name of peccaries. Two species of peccary are known, but the animals have never been domesticated. They wander about in small herds, never assailing unless provoked, but being unluckily liable to take offence and resent it to the death. They are but small animals, and the tusks of the males seem so short as to be almost insignificant. They are, however, not only shaped like lancets, but are nearly as sharp both at point and edge, and are as formidable as those of the largest wild boar of the Old World.

The chief danger in meeting with these wild swine lies in their absolute want of fear and their tireless obstinacy. If a traveller be beset by the peccaries, his only chance is to climb a tree, where they cannot reach him. But they will settle them-

selves round the tree, watching for him, and if he be unarmed, he will have but a poor chance for his life. If, however, he should, as travellers in those regions mostly do, possess a revolver and ammunition, he can shoot every one of the besiegers, and, indeed, until the last is dead it will not be safe for him to descend. The death of their comrades does not in the least affect the survivors, and, as was said by a traveller who had been reduced to such straits, they stay to be shot as if they thought that they were born for that sole object.

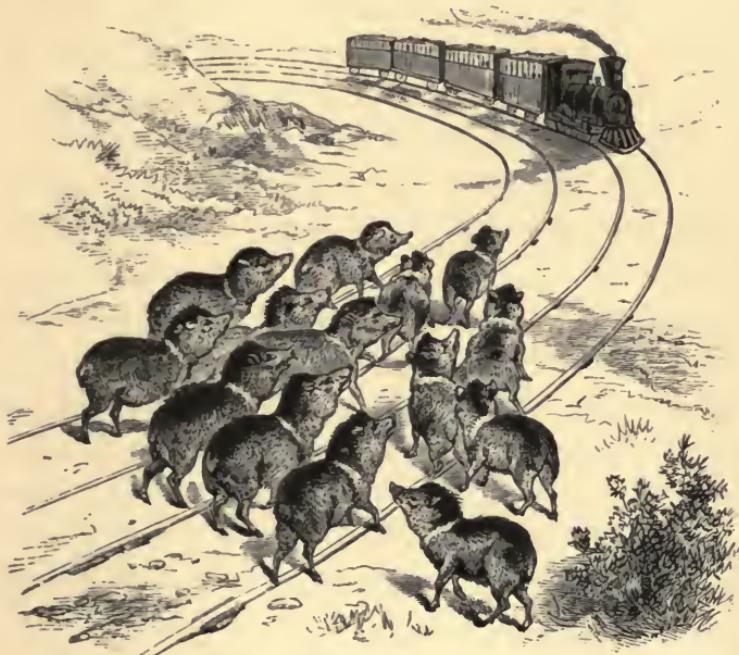
A remarkable account of these American wild swine was given by Mr. Frank Reid, who was formerly a driver on the Southern Pacific line.

One day he saw a number of peccaries on the line, which, like American railroads generally, is not protected by fences, and naturally thought that they would run away.

‘In this, however, I was very much mistaken, for when they saw us they formed two or three lines, standing close together across the tracks. There was nothing to do but run through them, so I just put on a little more steam, and we charged down on this battalion of peccaries. They never budged an inch, and the train cut right through them, killing a large number of them. Those that were unhurt rushed madly at the cars as they flew past, and many were cut up under the wheels.

‘Coming back on the return train next day, I was

very much astonished to see those that were left unhurt of the herd standing in the same place. As soon as they heard us coming, they arranged themselves in battle array, and we had to cut through them again, killing a large number. As we came up they became frantic, rushing at the cow-catcher and wheels, only to be killed.



PECCARIES AND TRAIN.

'Next day there they were again, and the same tactics were gone through. This went on, day after day, until only three were left. These three ranged themselves as the others had done, and we bore down upon them. I hated to kill these plucky little fellows, but I could not help it. Two of them were

carried away on the cow-catcher, and the other made a rush at the cars, and the last of the tribe was killed.'

The wild swine of the Old World are, when they have been long undisturbed by man, even more formidable than the peccaries, the latter animals avoiding the habitations of man, and not attacking unprovoked. But the wild boar rather prefers the vicinity of man, because he finds abundance of food in the cultivated grounds. In Palestine they are as plentiful as they used to be when the Psalms were written.

According to Canon Tristram, 'not only does it devour any fruits within reach, but in a single night a party of wild boars will uproot a whole field, and destroy the husbandman's hopes for the year.' The places they love to frequent are the reedy marshes by rivers and lakes, and they swarm in the thickets along the banks of the Jordan from Jericho to the Lake of Gennesaret.

'From these fastnesses, whence neither dog nor man can dislodge them, they make nightly forays upon the corn-fields and root-crops of the villagers, returning at daybreak to their coverts. About Jericho they are specially destructive, and when the barley-crop is ripening the husbandmen have to keep nightly watch to drive them away. . . . They are also plenti-

ful near the Sea of Galilee, by the waters of Merom, under Mount Tabor, about Mount Carmel, along the banks of the Kishon, and in the Plain of Sharon.

‘We were surprised to find them also in the bare Wilderness of Beersheba, where they tear up innumerable furrows in the herbage of the downs, subsisting on the roots of the asphodels, irises and crocuses which carpet the slopes and plains. But nowhere are they so abundant as among the valleys of Moab and Gilead. . . .

‘Among them, close to the never-failing water, the wild boar multiplies rapidly, and as we rode up the wadys they were never out of sight. Every few minutes they were put up, and scampered up the hills, sometimes one or two huge old boars alone, more frequently a sow with a long train of little ones, all striped, zebra-fashion, black and yellow. Were the country east of Jordan more cultivated, the wild boars would be a perfect pest until their numbers had been reduced. Even under Hermon, in the vineyard districts, we heard grievous lamentations of the damage done to the vines by the boars, which devour not only the grapes, but also munch up the bearing shoots.’

In corroboration of this habit of infesting the cultivated districts and intruding upon man, Lady Anne Blunt, in her ‘Pilgrimage to Nejd,’ mentions that in the Wudian, near the Tigris, the wild boars simply swarmed, and were so bold that they could

scarcely be kept out of the camp. The natives stood in great awe of them, as they were very savage beasts, and would attack without the slightest provocation.

One of them lay within ten yards of the path leading to the tents. It was perfectly visible from the path, and the people were so afraid of it that in going to the camp they made a wide circuit. Mr. Wilfrid Blunt, who possessed a repeating Winchester rifle, was entreated by the natives to kill the animal. This he did, but with some difficulty, owing to its savage character and the great tenacity of life which is possessed by the wild boar. In accordance with the native farmers' requests, he also killed four boars and a sow.

On the following day, however, another boar avenged the death of himself and his comrades. He had been twice shot through the body, the last bullet rolling him over apparently powerless. The Arabs on foot rushed in to despatch him, but as they neared him, he sprang to his feet and charged Lady Anne, who was trying to turn him. He then plunged into some deep water, but almost immediately changed his mind, came to land, and, before his intention was suspected, charged again, this time catching Mr. Blunt's beautiful Arab mare Ariel, and tossing her as if he had been a bull tossing a horse in the arena. The effort was his last, for he then lay down, and was killed without difficulty. As for poor Ariel, the whole inside of one hind leg was

ripped up from the hock to the knee-joint, or, as it is professionally called, the 'stifle.' A large artery was cut, and the tendons had been laid open so that she could not put her foot to the ground.

I give this anecdote because it well illustrates the character of the wild boar.

Accustomed as we are to swine which have lived a wholly artificial life, which have been regularly supplied with the most nourishing food, and which from their birth to their death have scarcely ever set foot outside the narrow confines of their sty, and know not what exercise means, we can scarcely realize the wild boar as he appears in his own country. Our idea of a hog is a heavy, sluggish, dirty and greedy animal, without a thought in its head beyond its food-trough.

But the wild boar is a very different animal. It has to forage for its own food, and often is forced to subsist on roots, which it first has to find and then to dig out of the ground. There is not an ounce of superfluous fat upon it, and its swiftness of foot is marvellous. At a rush it can, as we have seen, even after being twice shot through the body, overtake and disable a swift Arab horse, while, in fair chase, it can tire out any horse that is not of high lineage and is not in thorough training.

It is as active as a cat, and, even when pressed by its pursuers, can suddenly spin round, assume the offensive, and charge its adversaries with fatal effect. It has been known to leap clear over a fence more

than eight feet in height, and can leap across ravines which would stop most horses. In India, where it seems to attain its perfection, it is even more dreaded by the natives than the tiger, and with very good cause. With the rare exception of 'man-eaters,' the tiger seldom attacks man, and, as we have seen, in many cases, man and tiger live amicably as neighbours. Moreover, the tiger does not injure the crops, whereas the wild boar not only attacks without provocation, but is a most destructive foe to the agriculturist.

Even the domesticated animal can do great harm in cultivated ground unless it be 'ringed.' The 'ring' is a long and slender nail made of soft iron, and having a very wide, flat head and a very sharp point. When the animal is ringed, the nail is thrust downwards through the cartilage of the snout, and then bent upwards so as to form an incomplete circle. It does not in the least interfere with ordinary feeding, but as soon as the pig begins to root in the ground, the point of the ring runs into its nose and puts an effectual stop to digging.

The operation does not seem to cause much pain, if we may judge by the demeanour of the animal. When captured, he squeals most vigorously, but as soon as the ring is placed and he is released, he trots off gaily, as if to say, 'Is this all? I really thought I was going to be killed.'

A very ingenious instrument has been invented for ringing pigs, whereby the operation scarcely takes

two seconds. A pair of pincers has on the inside a groove in which the nail is laid, the pincers being open. As soon as the pig is caught, the pincers are applied to its snout, and, with a single movement, the nail is driven through the cartilage and curved into the proper form. This plan has the advantage that no skill is required in the operator, the simple closing of the hand being all that is necessary. One or two of these rings are now before me, one being in its straight condition and the other curved by the pincers.

In the United States the hog is apt to be very mischievous in fields and gardens, the ring being seldom used. The following ludicrous account of outwitting a trespassing pig was communicated to one of the journals :

‘A farmer was greatly annoyed by his neighbour’s pig getting into his field and harvesting on his own account. The farmer had diligently searched for a defect in the fence, but failed to find one where the pig could by any possibility enter. So he concluded to watch, and soon had the satisfaction of seeing the thief enter the end of a crooked hollow log which made part of the fence, one end being in his field and the other in that of his neighbour.

‘After driving the burglar out, he changed the position of the log, so that both ends were in his neighbour’s field, and watched the result. Soon the pig came along, and went through the log as usual,

but upon searching for potatoes, he found only pasture grass. So, after some little delay, he seemed to arrive at the conclusion that he had not gone through the log at all, so he went through again, and, upon emerging into the pasture-field, seemed more mystified than ever. But after a more protracted search for potatoes than before, he seemed to conclude that owing to some blunder of his own he had not really gone through the log, so in he went again, and out into the pasture-field. But this time, he stood still as a statue for about half a minute. Slowly the bristles began to stand erect along his back, and with two or three tremendous sniffs he set off at the top of his speed for the house of his owner, and never afterwards could be induced to approach that part of the pasture-field.'

How and when the hog was brought under the dominion of man it is impossible even to conjecture. That it was a task of time is evident from the fact that improvements in the breeds are continually being made, as is the case with all domesticated animals. The transitional stage, in which the hog acknowledges the dominion of man, while retaining most of its wild habits, has been vividly drawn in the opening chapters of '*Ivanhoe*,' where Gurth the swineherd holds conversation with Wamba in the forest. Even at the present day there are in the New Forest pigs which are practically wild, and very odd-looking animals they are. Instead of possessing the rounded

contours and short legs with which we are accustomed to associate the pig, their bodies are as thin and flat as if they had been squeezed between two boards. The legs are long and skinny, and the spine sharp, so that the back view of a New Forest pig is irresistibly ludicrous.

In some parts of Europe the scene so graphically depicted by Scott is daily enacted, and has been vividly described by Sir F. Head. The Gurth of Langen-Schwalbach, who went by the popular name of 'Schwein-General,' was 'a wan, spectre-looking old man, worn out, or nearly so, by the arduous and every-day duty of conducting against their wills a gang of exactly the most obstinate animals in creation. A single glance at his jaundiced, ill-natured countenance was sufficient to satisfy one that his temper had been soured by the vexatious contrarities and untoward events it had met with.'

'In his left hand he held a staff to help himself onwards, while round his shoulder hung one of the most terrific whips that could possibly be constructed. At the end of a short handle, turning upon a swivel, there was a lash about nine feet long, formed like the vertebræ of a snake, each joint being an iron ring, which, decreasing in size, was closely connected with its neighbour by a band of hard, greasy leather. The pliability, the weight, and the force of this iron whip rendered it an argument which the obstinacy even of the pig was unable to resist.'

The *Schwein-General* had two *aide-de-camps*, one

‘a little bare-headed, bare-footed, stunted dab of a child, about eleven years old—a “flibbertigibbet” sort of a creature, which, in a drawing, one would express by a couple of blots, the smaller for her head, the other for her body, while streaming from the latter there would be a long line ending in a flourish, to express the immense whip which the child carries in its hand.’

The second assistant was a boy of about fourteen, and their duties were thus distributed. The town pigs lodged at home, but were expected during the day to get their own living on the mountains that overhang the town. At half-past five in the morning a call is sounded from a long wooden horn, and at the sound the pigs begin to issue from their homes. ‘Some, from their jaded, careworn, dragged appearance, are evidently leaving behind a numerous litter ; others are great, tall, monastic, melancholy wretches, which seem to have no other object left in this world than to become bacon ; while others are thin, tiny, light-hearted, brisk, petulant piglings, with the world and all its loves and sorrows before them. Of their own accord these creatures proceed down the street to join the herdsman, who occasionally continues to repeat the sorrowful blast from his horn.

‘The duty of the “flibbertigibbet” consists in taking care that every pig has turned out, and if she discovers a deserter, she finds him out, and with her whip impresses upon him a sense of his duty. The

task of the boy is to march in front of the herd, and not to allow the strongest and greediest pigs to usurp all the good things for themselves.'

In the midst of the herd marches the General himself, keeping a sharp eye upon his charge. 'If any little savoury morsel caused a contention or stoppage on the march, the old fellow slowly unwound his dreadful whip, and by merely whirling it round his head, like reading the Riot Act, he generally succeeded in dispersing the crowd. But if they neglected this solemn warning—if their stomachs proved stronger than their judgments—and if the group of greedy pigs still continued to stagnate, "Arrif!" the old fellow exclaimed, and rushing forward, the lash whirling round his head, he inflicted, with a strength which no one would have fancied he possessed, a smack which seemed absolutely to electrify the leader. As lightning shoots across the heavens I observed the culprit fly forwards, and for many yards continue to sidle to the left; it was quite evident that the thorn was still smarting in his side; and no wonder, poor fellow, for the blow he received would almost have cut a piece out of a door.

'All day the herd was kept on the mountain, where the animals contrived to find a very miscellaneous diet, consisting mostly of roots, worms, beetles, and other creeping things, which they discovered by turning stones and digging in the ground, their sensitive snouts seeming to take cognizance of

anything eatable, quite independent of the eye.' The extreme sensitiveness of the snout will explain the fact that the wild boar feeds by night, retiring to his lair during the day.

It is easy to see how an enterprising pig-owner would improve on this very primitive method of rearing the animal by keeping it at home, supplying it regularly with nourishing diet, and not allowing it to expend its vital powers in food-hunting.

If the reader will refer to page 70, he will see that I have referred to this graphic narrative, and drawn attention to the fact that the ancient Egyptian swineherds employed a similar whip in driving their animals. As the swine were intended only for treading the grain into the soil, they were muzzled in order to prevent them eating it.

One of the most valuable characteristics of the pig is the rapidity with which it fattens when supplied with abundant food, and the size which it will attain is really wonderful. Most of my readers will be familiar with Captain Basil Hall's pet ship-pig Jean, who became so fat by constant feeding that she not only lost the power of locomotion, but was obliged to lie on her back with all her four hoofs pointing impartially to the sky. Captain Basil Hall does not give her dimensions, but the late Frank Buckland describes a prize pig which measured nine feet from the snout to the root of the tail, and was eight feet six inches in girth.

Not only does the pig attain these vast dimen-

sions, but both the flesh and the fat are capable of taking salt to an extent that enables them to be preserved for an almost indefinite time. Hence the great value of the hog for victualling ships, fortresses, and armies. In the United States pickled pork forms a large portion of the diet of the agricultural classes, and even in the great cities, such as Boston and New York, many of the wealthy inhabitants consider it a point of honour to make their Sunday's dinner of pork and beans. Why the baked beans for which Boston is famous should be popularly known as 'Marblehead turkey' I never could find out, though I have asked the question in many parts of the States.

As is well known, Chicago is the chief centre of the pig-curing and killing business, which is there reduced to a science, almost the whole work being done by machinery. The rapidity with which whole droves of pigs are converted into pork is almost incredible, and the process is conducted with such economy that, as has been wittily said, there is nothing wasted but the squeal, and very little of that.

Thus we have the remarkable fact that while many millions of the human race avoid, and, as we have seen, absolutely fear the hog as an animal whose very touch would imperil their welfare in a future state, many more millions of human beings not only prize it for its value as food, but are absolutely dependent on it for their living.

Again, its extreme hardness, and the ease with which it can pick up a living, render it exceptionally valuable for acclimatization in climates not its own. How it has thriven in America has already been mentioned, and in every country to which it has been transported it has accommodated itself to the new conditions with which it has been surrounded.

For example, when Captain Cook explored the Pacific Islands, he found that they were destitute of mammalian life. He accordingly landed pigs and poultry in every island to which he had access, and the result has been that both have thriven, especially the latter.

Another characteristic which renders the pig so valuable, especially when imported into strange countries, is its extraordinary fecundity. Most of the pachydermatous animals only produce a single young one at a time, while the pig will produce eight or ten at a birth, and have more than one litter annually. Gilbert White mentions a sow which for ten successive years produced two litters of at least ten in each and often more. On one occasion, she had twenty young; but, of course, could not nourish them all. When she was at last killed, she had produced more than three hundred young—a feat which might be expected from a rabbit, but scarcely from a pachyderm.

Once established, the hog has exercised a remarkable influence over the aborigines. There is very little doubt that the cannibalistic customs of New

Zealand and Fiji were largely attributable to the want of animal food, and that the introduction of the pig has had the effect of substituting the flesh of the hog for that of man. Indeed, the well-known euphuism for a human body cooked for food is 'long pig.'

Even in Hawaii and Tahiti, cannibalism was in force, whereas at the present day the natives would be as disgusted as ourselves at the idea of eating human flesh. But for the pig they have the greatest admiration. They make pets of the piglings, and carry them about as our children carry kittens. They rear them with the greatest care, and to injure the pet pig of a Sandwich Islander is an offence which is resented by the owner as an insult offered directly to himself.

An American traveller gives an amusing instance of the affection with which the pig is treated in the Sandwich Islands. Going over the mountains, he saw a group of women sitting under the shade of a pandanus tree. On arriving at the tree, he saw that the women were grouped round a huge hog. They were taking it to market, and proceeding by easy journeys, so as to deliver the animal in the best condition. The hog was lying on its side, and the women had removed their only garments, steeped them in a brook which ran hard by, laid them on the object of their care, and were busily employed in fanning him.

As the pig was, until comparatively late years,

the largest animal that the natives had seen, they used its name as a synonym for any large animal ; and when the horse was first introduced, it was universally called the "man-carrying pig." Nowadays, the Hawaiian women are most accomplished equestrians. They dispense with the side-saddle, and sit their horses with wonderful ease and grace.



FARMER RIDING BOAR.

The hog, by the way, can be used for riding purposes, and a sporting friend of mine tells me that no animal is so delightful to ride. Indeed, it has actually been trained for this purpose, and some thirty or forty years ago a Norfolk farmer laid a bet that he would ride his boar-pig a distance of four miles and a quarter within an hour. He rode the time-race, and won it easily. The pig has also been

trained to draw the plough, and a team of four pigs once drew a chaise for some five miles.

Beside pork, bacon, and ham, the hog furnishes lard, hide, and bristles, all of which are important adjuncts to civilized man. Putting aside its culinary value, lard is largely employed in the manufacture of various ointments. 'Cold cream,' for example, is nothing but lard well mixed with rose-water. Then the hide has long been considered the only material of which saddles can be made, while the bristles serve a variety of purposes. Their value to brush-manufacturers is well known, and it is calculated that in Russia and Prussia alone more than a million pigs are killed annually in order to furnish the requisite supply of bristles. Our own hogs are useless for this purpose, their bristles being too thin and feeble for brush-making, and so it is necessary to import them from abroad. Only those bristles which run along the back are used, and the annual demand amounts to about two million pounds.

The bristles of our own pigs, however, are not without their uses to man. In the Orkneys, where the fowlers are in the habit of lowering themselves over the rocks for the purpose of taking eggs of sea-fowl, it has long been known that a rope composed entirely of hemp is soon cut or frayed by the sharp edges of the rocks. Special ropes are therefore made for this purpose. They are thin and light, but of very great strength, the longest bristles of pigs, or the hair from cows' tails, being mixed with

the hempen fibres, and incorporated with the rope.

Again, shoemaking is one of the most important arts of civilization, and but for the dominion which man exercises over the hog, the difficulties of the art would be greatly increased. Instead of using needles wherewith to sew the leather, the shoemaker employs hog-bristles. The upper part of the bristle is naturally split into several parts, and the shoemaker twists them into the strands of his waxed thread in such a way that the thread and bristle form one continuous line. The necessary holes are bored with the awl, and the thread is guided through them by means of the bristle.

The delicacy of scent, which has already been mentioned, has been turned to the use of man. The most remarkable example of this faculty occurred in the celebrated sow Slut, who lived when the present century was in its youth. She came into the possession of a gamekeeper, who taught her to mark game like a pointer. She could do almost anything that a dog could be expected to do, and in some respects surpassed even the dogs at their own business, having frequently detected a covey of close-lying birds which the dogs had missed. She was not restricted to one kind of game, but in a single day has been known to point partridges, pheasants, black-game, snipes, and rabbits; but for some unexplained cause she never took any notice of hares.

At first she was taken into the field with dogs, but

they disliked her, and then her teacher found that she was perfectly capable of working alone. She was so fond of sport that when she heard guns she would set off and join the party, and has been known to trot seven miles on the chance of finding a shooting-party. I regret to say that she acquired a vice to which even the best-bred dogs are liable, namely, sheep-worrying, and, to the great regret of all who knew her, she had to be condemned to death, just as would have been the case with a dog under similar circumstances.

On the Continent, where the underground fungus called the truffle is more valued than it is in this country, the truffle-hunters train pigs and dogs to discover it by scent. When either of these animals scents a truffle, it begins to scratch up the ground if a dog, or to grub in it with the snout if a pig. A remarkable instance of truffle-hunting occurred in France. A landed proprietor possessed a piece of ground which was prolific in truffles. But, being something of a sportsman, he also possessed a number of wild swine. Finding, however, that the wild pigs grubbed up his truffles, he had them all killed off.

A singular result followed. Vipers increased with such rapidity that the truffle-gatherers were forced to abandon their task, and the owner was obliged to replace the slaughtered swine with a fresh supply. As the narrator neatly put the point, 'it was a terrible dilemma to be placed in, and irritating to an epicure, for if he raised wild boars he could not grow truffles

to stuff their heads withal.' In the United States hogs clear the woods of rattlesnakes effectually, grow fat on them, or acorns and beech-mast, and prime mess pork is the result.



TRUFFLE-HUNTING.

Perhaps we might utilize the intellect of the pig more than we do at present. The very low idea which we possess of a pig's intellect is entirely mis-

taken, and due to the popular ignorance of the animal. We confine it in a small dwelling for the whole of its life, we feed it at regular intervals, we deprive it of all opportunities of exercising its intellect, and then call it a stupid animal. Any of us would be stupid if placed from childhood in similar conditions, and we are not justified in blaming an animal for shortcomings which we ourselves have caused.

In its own country, and in the enjoyment of freedom, the pig is as crafty as the fox, and, like that animal, when chased, it employs almost inexhaustible wiles in order to reach its stronghold. In countries where the termites make their wonderful habitations, an abandoned termite nest is a favourite resort of the wild hog. So is a rocky cave, and when it is once ensconced, to eject it is an almost impossible task. One favourite device for reaching its home is to feign lameness or weakness, and trot or canter along just out of spear's reach. The inexperienced hunter thinks that he is sure of his boar, and follows leisurely, until the animal suddenly wheels round and disappears, tail foremost, into an unsuspected hollow.

Once in its stronghold, the boar bids defiance to its enemies. Nothing will induce him to venture far out of his fortress, but if any of the foe should approach the entrance, he leaps out with lightning speed, charges right and left among the enemy, and leaps back again before there has been time to point a spear or aim a rifle.

A notable example of piggish ingenuity occurred at Burdwan, India. The Rajah possessed a large menagerie, including a tank in which some crocodiles were kept, the reptiles being fed on pigs. One day a pig contrived to make its way out of the water before the crocodiles could seize it, and took refuge among the legs of two rhinoceroses that had come down to the water to drink. Ever after that time the pig never ventured to the water unless protected among the legs of his strange allies. At last one rhinoceros died, and the legs of the survivor were not a sufficient protection, so that in the end the crocodiles succeeded in securing the prey which had so long eluded them by its craftiness.

As we have already seen, the pig has been trained to carry a rider, to draw a carriage on the road, and to drag a plough through the soil. It has proved itself the superior of the dog in pointing game, while the 'learned pig' is a household word.

The last point that we have to notice in the dominion of man, as exercised over the swine, is the great variety of breeds which are known in this country, each having its peculiar excellences. The breeds are as artificial as those of the other domesticated animals, and are due to the constant exercise of man's dominion.

There is some controversy respecting the origin of the domestic animal, some naturalists thinking that it belongs to a different species from the wild boar, and basing their theory on the fact that the

young of the wild boar are striped like zebras, with black and orange, which is not the case with the young of the domestic swine. Others think that it is a combination of the wild boar and an Eastern species which is now never seen in a wild state. Inasmuch, however, as there is a breed of pigs which has the hoofs solid instead of cleft, and yet is acknowledgedly a 'sport' which has, like the lop-ear of the rabbit, been made permanent by man, we may, in my opinion, be satisfied with the conclusion that all the varieties of breed have a common ancestry, and that their very diversities afford a fresh proof of the universal dominion of man.

POSTSCRIPT.

ONE is tempted to insert here, as these sheets are passing through the Press, an extract from the *Field* newspaper (September 21, 1889), which is of especial interest as bearing on the subject of the present work.

ECCENTRIC TRAVELLING.

A BELGIAN has recently announced his intention of travelling from Brussels to Paris in a little carriage drawn by two dogs. Although dogs are now being trained for military purposes, there is a general feeling against the revival of employing them as beasts of burden, though on the Continent they are occasionally used as such. The Belgian Government, however, appear to view the matter in a different light, for they have, it is said, authorised one of the King's Guard to ride with the dog-carriage as a mounted escort, and the pair will present a curious spectacle at the completion of their journey. But perhaps the most remarkable employer of dog power ever known in England was an old man born without legs, and known as 'Old Lal.' He procured a simple vehicle, which was merely a tray on wheels, but provided with lamps and springs, and to this he was accustomed to harness four foxhounds, though when about to attempt some exceptionally fast journey he preferred three abreast. He used to frequent the great northern highways between the Peacock at Islington and the Sugar Loaf at Dunstable, and his occupation was racing—and beating—the fastest coach on the road over a ten-mile stage. 'His team,' says the author of 'Road Scrapings,' 'were cleverly harnessed, and well matched in size and pace. His speed was terrific, and as he shot

by a coach going ten or twelve miles an hour, he would give a slight cheer of encouragement to his team ; but this was done in no spirit of insolence or defiance, but merely to urge the hounds to their pace. Arriving at the end of the stage, the passengers would find poor "Old Lal" hoping on his hands to the door of the hostelry, whilst his team, having walked out into the road, would throw themselves down to rest and recover their wind.' Some of the details of the old man's life by Capt. Haworth, who will be remembered as one of the pioneers of the coaching revival, are amusing. 'When asked how he fed his hounds, he was wont to say, "I never feed them at all ; they know all the hogs' tubs down the road, and it's hard if they can't satisfy themselves with somebody else's leavings." . . . When the poor old man required the use of his hands it was a matter of some difficulty to keep his perpendicular, his nether end being shaped like the fag end of a farthing rushlight ; and he was constantly propped up against a wall to polish the brass fittings of his harness. . . . Lal's travelling attire was simplicity itself. His wardrobe consisted of nothing but waistcoats, and these garments having no peg whereon to hang, except the poor old man's shoulders ; he usually wore five or six of various hues, the whole topped by a long scarlet livery waistcoat. These, with a spotted shawl round his neck, and an old velvet hunting-cap upon his head, completed his costume.' Lal's end was somewhat tragic. He was one day missed, and it was reported that he had shared the fate of Actæon, and had been eaten by his own hounds ; but his body was eventually found in a plantation off the road ; and the coroner suggested that in the course of poor old Lal's journeys a fox had crossed the road, and that his team, reverting for the moment to their original duty, gave chase, and so capsized the waggon and killed their master.

A similar fate nearly awaited Lord Orford, who, among other eccentricities, was given to driving four stags in hand, and all went well until one day, towards the close of the last century, a pack of hounds kennelled in Essex came across the slot of the team. One deer provides a 'ravishing scent' for a pack ; but when the hounds came across the scent of four, they incontinently followed it up at a pace which must have pleased their followers, but which, at the same time, threatened imminent danger to his lordship. The pack gained on the team, and Lord Orford had only just time to turn hurriedly into the 'friendly portals' of the Ram Hotel at Newmarket, and to order the gates to be shut, before the baying hounds were heard outside.

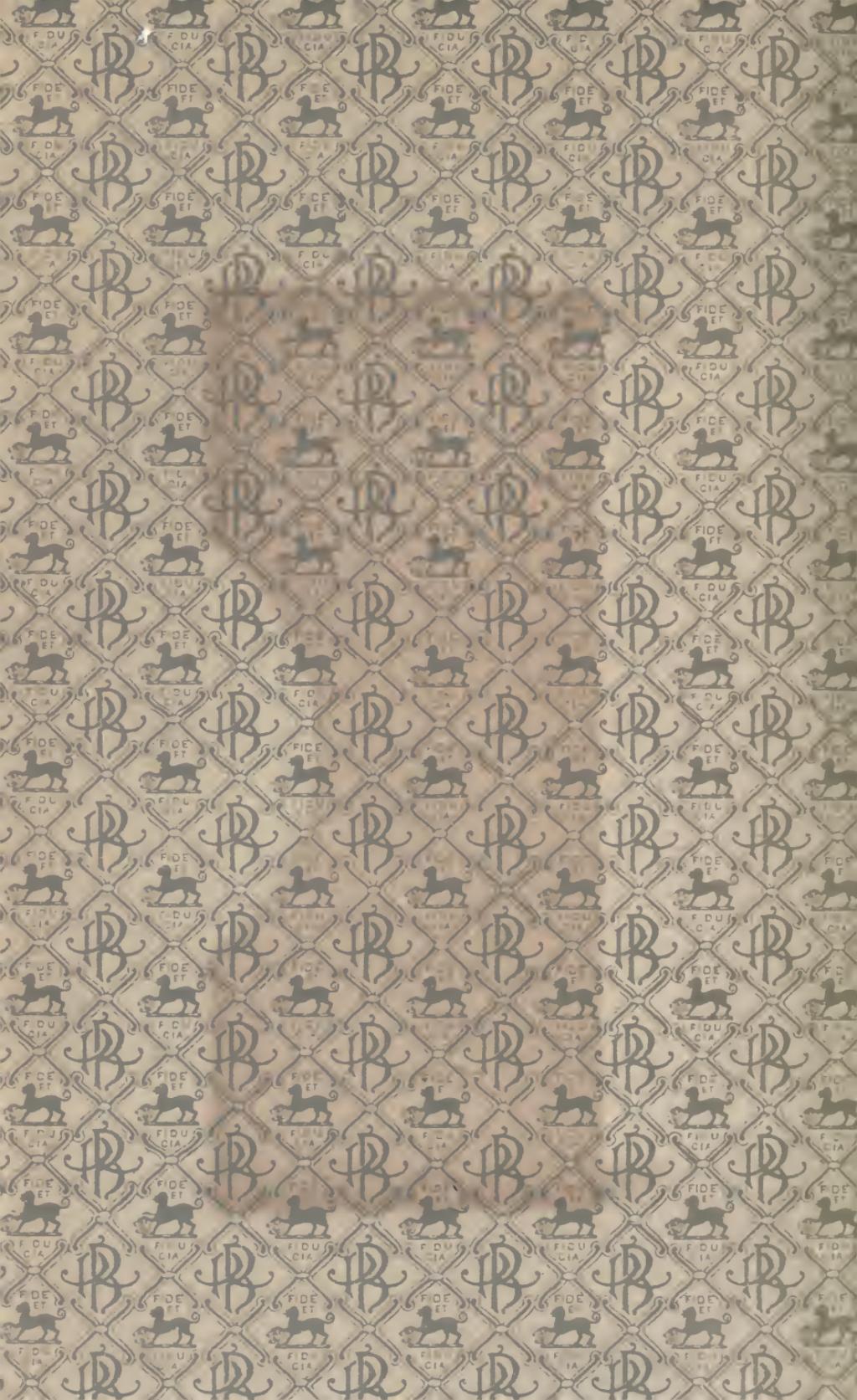
In another direction, too, history repeats itself. *Vanity Fair* is responsible for the statement that at a horse show recently held in co. Down, one of the competitors for jumping honours was a young white bull, who, ridden bare-backed by a boy, took all the fences in hunter-

like fashion—an Irish bull with a vengeance. This, however, is not the first jumping bull on record, for a well-known 'character,' Jemmy Hirst, who was born at Rawcliffe, in Yorkshire, in 1738, used to hunt on one he called Jupiter. It one day occurred to him to break Jupiter to saddle, and he was bridled and saddled forthwith, but on being mounted, rushed furiously down a field, charging a strong hedge at the farther end. Instead of jumping it, however, he 'chanced' it, with the result that the rider was sent flying into the next enclosure. Jupiter, however, was soon ridden as a hack, and on him Jemmy Hirst used to go to Snaith Market, and in due time became so proficient in jumping, that his owner used to ride him to hounds; and by the time Jupiter was worn out, another bull was ready to take his place.

PL

THE END.





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